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ABSTRACT

Held to solicit the opinions of experts regarding the preservation of the brittle books in the nation's libraries, this hearing was intended to determine the appropriate federal, state, and private sector roles; learn the magnitude of costs and who should bear them; and explore what procedures are necessary to insure that selection decisions are made equitably and that the public can fully participate in all aspects of the process and the solution. Following introductory remarks by Representative Pat Williams, the subcommittee chairman, statements, prepared statements, letters, and supplemental materials were presented by: (1) Lynne Cheney (National Endowment for the Humanities); (2) Vartan Gregorian (New York Public Library); (3) Daniel J. Boorstin, William J. Welsh, and Peter G. Sparks (Library of Congress); (4) Carole F. Huxley (New York State Department of Education); (5) Warren J. Haas (Council on Library Resources); and (6) David C. Weber (Stanford University Libraries). Also included are prepared statements by Representative Thomas J. Downey (New York), Arthur W. Schultz (President's Committee on the Arts and the Humanities), the Association of American Universities, National Association of State Universities and Land-Grant Colleges, Richard M. Dougherty (University of Michigan Library), and Nova Tran Corporation; a letter from Billy E. Frye (Commission on Preservation and Access); and two articles on the proposed Library of Congress diethyl zinc deacidification program excerpted from the September 15, 1986, issue of "Library Journal." (KM)

OVERSIGHT HEARING ON THE PROBLEM OF "BRITTLE BOOKS" IN OUR NATION'S LIBRARIES

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HEARING

BEFORE THE

SUBCOMMITTEE ON POSTSECONDARY EDUCATION

OF THE

COMMITTEE ON EDUCATION AND LABOR HOUSE OF REPRESENTATIVES

ONE HUNDREDTH CONGRESS

FIRST SESSION

HEARING HELD IN WASHINGTON, DC, ON MARCH 3, 1987

Serial No. 100-1

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OVERSIGHT HEARING ON THE PROBLEM OF "BRITTLE BOOKS" IN OUR NATION'S LIBRARIES

TUESDAY, MARCH 3, 1987

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON POSTSECONDARY EDUCATION,
COMMITTEE ON EDUCATION AND LABOR,
Washington, DC.

The subcommittee met, pursuant to call, at 10:05 a.m., in Room 2261, Rayburn House Office Building, Hon. Pat Williams (chairman of the subcommittee) presiding.

Members present: Representatives Williams, Owens, Hayes, Martinez, and Coleman.

Staff present: Gray Garwood, staff director; Anne Hausmann, legislative associate; Colleen Thompson, clerk; and Paula McCann, minority legislative associate.

Mr. WILLIAMS. I call this hearing of the Postsecondary Education Subcommittee on the subject of the problem of America's "brittle books" to order.

Someone once described time as a thief, who loves to get sweets into its book; and time is slowly stealing America's and the world's cherished past. This year, perhaps unlike any other in America's history, being our bicentennial of the Constitution, it is perhaps a most appropriate time to consider the problem that has been characterized as a national emergency—appropriately so, I believe.

Today, many documents that represent this Nation's cultural and intellectual heritage are literally eroding away. While estimates vary, librarians tell us that millions of books in America's libraries are now in great danger. These are the "brittle books" and they could soon be lost forever.

We know the major cause of the problem of brittle books is the acid content of the paper upon which they are printed. The technology to prevent this problem from occurring in the future is now being developed. We also have the technical capability through microfilming these documents to resolve part of the present dilemma, thus, there is reason to hope that the knowledge contained in brittle books can be saved.

A small number of people with limited resources have been working for a number of years in the public and private sector, and some progress has been made.

Federal efforts are contributing to the progress. The National Endowment for the Humanities Office of Preservation Programs, Title II-C programs of the Higher Education Act, the Library of Congress Preservation Program, the National Commission on His-

torical Records, the National Library of Medicine, and the National Agricultural Library, all have important ongoing preservation programs.

During fiscal year 1986, approximately $12½ million was spent for preservation activities through all these various efforts. However, it is important to note that not all of these dollars were spent on preserving books; in fact, many of these dollars were spent to fund needed conferences, specialized training, and other secondary activities—all related to the need to spread awareness of the problem and develop the expertise to confront it realistically.

There is clearly more to be done, and soon. It is our Nation's very memory that is at risk.

Our purpose today, then, is to hear what the experts believe might be done. We want to explore solutions and we want to determine the appropriate Federal, State, and private sector roles.

We need to know the magnitude of costs and who should bear them. Since it is unlikely that all books and collections will be preserved, we are interested in exploring what procedures are necessary to insure that selection decisions are made equitably and that the public can fully participate in all aspects of the process and the solution.

Let me turn now to the ranking minority member of the committee, Mr. Coleman.

Mr. COLEMAN. Mr. Chairman, I think you have covered the problem of what we are looking at this morning. I will, in the interest of time, forego any statement and look forward to the statements of the witnesses.

Thank you.

Mr. WILLIAMS. Thank you.

We will ask both members of our first panel, Ms. Lynne Cheney and Dr. Vartan Gregorian, to come to the table.

It is nice to see you both again. Chairperson Cheney, you may proceed.

STATEMENTS OF LYNNE CHENEY, CHAIRPERSON, NATIONAL ENDOWMENT FOR THE HUMANITIES, AND CHAIRPERSON, NATIONAL COUNCIL ON THE HUMANITIES, ON BEHALF OF THE NATIONAL ENDOWMENT FOR THE HUMANITIES; AND VARTAN GREGORIAN, PRESIDENT, THE NEW YORK PUBLIC LIBRARY

Ms. CHENEY. Thank you very much.

I appreciate greatly this opportunity to appear before the subcommittee to talk about brittle books. As you made very clear in your opening statement, brittle books is a large and general term, and when we at the Endowment speak of preservation, we mean not only books but also newspapers, periodicals, and important documents that are crucial to our Nation's heritage.

I notice that both Greg and I have brittle books for you here today to illustrate the problem. His is rather dainty and delicate and mine is rather large and cumbersome. But they do make an important point.

Mr. Gregorian was showing me before the meeting that he has a long and detailed accounting of his book and of its historical impor-

tance. It happens to be the only copy of that book presently available in the United States.

My book is more of a mystery. You can see, though, that it is in great danger. It falls apart as I pick it up. The book is in Spanish. It is a military history of the Pacific War. It is impossible for a lay person or an expert in a field outside Spanish history to determine the importance of saving this book.

So one of the efforts that we have made at the Endowment in our Office of Preservation, which we established in 1985, is to be sure that humanities scholars come together with librarians, come together with archivists, and come together with professionals in the field to help make those important decisions about which books will be preserved.

Our thrust at the Endowment has been on intellectual content rather than on the book itself. As we see it, the best way to preserve that intellectual content is through microfilming. The process of selecting those volumes, as I say, is not only one that involves humanities scholars, it requires coordination and planning on a grand scale with a number of groups. We have some grants that we have provided which we hope will serve as models to others who are interested in the preservation effort.

One of our important grants was to the Research Libraries Group in Stanford, California, to conduct a nationwide microfilming program of endangered books on American history and culture. RLG is coordinating the microfilming of about 45,000 titles at 10 of the Nation's largest research libraries.

This project is significant not only for the scholarship that is being preserved as a result of it, but also because of the cooperation participating libraries have shown in ensuring that there is no duplication of microfilming. Not only are the decisions that have to be made upfront important, they also require great coordination after the fact to make sure that the books that are microfilmed are entered onto some central record list so that different libraries won't find themselves having to use funds, which are always in scarce supply, to duplicate efforts that have been made in other places.

We are supporting a major project of the Association of Research Libraries to bring together in machine-readable form the National Register of Microform Masters, which, when it is completed, will make it easier for researchers and the staff of preservation projects to know what exists on microfilm.

Today, I want to spend just a few minutes of my time talking about newspapers. As someone who has written history, I am well aware that it is often the case that the kind of detail that can make the past come alive can only be found in the Nation's newspapers. And yet, newspapers published after 1850 are at risk in the same way that books and documents are.

Consequently, the Endowment launched in 1982 the United States Newspaper Program. Our goal is to establish a central bibliographic record of all 250,000 newspaper titles that have been published since 1690 and to microfilm copies of the most historically important of those newspapers which are endangered.

We make grants to individual State projects. We make grants to national libraries and other repositories. Twenty-five States, two

Territories, and eight national repositories are now involved in this effort.

I am happy to report to you, Mr. Chairman, that in Montana the newspaper project has been one of the most exemplary. It is the first State, in fact, to complete all phases of its activities. Under the guidance of Mr. Robert Clark at the Montana Historical Society in Helena, this project has managed to register over 1,000 titles of newspapers held in Montana, and most of these newspapers have been preserved on microfilm.

Another thrust of our efforts at the Endowment has been to make sure that personnel are in place who are knowledgeable about the preservation effort. Unless the number of people who can organize and manage a major preservation program grows, the number of institutions that can become involved in preservation will be limited. Only 25 to 30 libraries now have established programs.

Last month the Endowment made a major award to the Columbia University School of Library Service to continue its training program for preservation administrators and conservators.

Columbia's program, which the Endowment has supported since it began in 1981, offers the Nation's only formal curriculum in preservation administration. We are looking for other ways to help increase the Nation's supply of trained preservationists.

We recently provided partial funding for a preservation training institute for archivists, under the direction of the Society of American Archivists and the Northeast Document Conservation Center—and that event will occur this June.

For the national effort on preservation to move ahead, there simply must be more public awareness of the issues involved. That public awareness is also necessary to stimulate the non-Federal support that is needed for this to be successful.

I, as a scholar myself, spent many years working in libraries, working with newspapers particularly, that were in the state that this book is in now, without having any grasp of the total problem. I would go home after a day in the Library of Congress reading old newspapers and feel the resin on my hands and find pieces of paper clinging to my clothes. Though I was involved with these documents, I did not understand the magnitude of the problem.

One of the efforts we have undertaken at the Endowment to increase public awareness of the problem is to help fund a film on the subject of preservation. It is called "Slow Fires". It will exist in both a one-hour and a half-hour version. The hour-long version will air on PBS.

We are hoping that both versions of this film will be of help to people involved in preservation efforts to raise not only public consciousness but to raise the non-public funds that this effort will involve.

I understand that the President's Committee on the Arts and the Humanities will be submitting testimony to today's hearing and their efforts to increase financial support from the private sector for preservation activities is most heartening.

Preservation, if it is to be successful and cost efficient, will involve commitment and cooperation. The libraries, archives, and other repositories that hold endangered materials must demon-

strate a commitment to saving their own holdings. State and local governments must show a willingness to preserve books and periodicals under their control. Foundations, corporations, and other private funders must be encouraged to contribute to the preservation of our intellectual heritage.

The Endowment, for its part, will use its good offices to further these activities and to help coordinate them, and to continue to fund model projects, after which others may pattern their efforts.

Thank you, and I am happy to entertain questions now or to listen to my good friend Greg.

[The prepared statement of Lynne Cheney and additional material follow:]

NATIONAL ENDOWMENT FOR THE HUMANITIES

WASHINGTON, D.C. 20506

STATEMENT

OF

LYNNE CHENEY

CHAIRPERSON, NATIONAL ENDOWMENT FOR THE HUMANITIES

and

CHAIRPERSON, NATIONAL COUNCIL ON THE HUMANITIES

before the

SUBCOMMITTEE ON POSTSECONDARY EDUCATION

of the

UNITED STATES HOUSE OF REPRESENTATIVES

MARCH 3, 1987

Mr. Chairman and Members of the Subcommittee:

Thank you for the opportunity to appear before this Subcommittee to discuss the topic of preservation. I understand that the focus of today's hearing is "brittle books." This is certainly a major problem, but at the Endowment "brittle books" are only part of what concerns us. Also at risk are newspapers, periodicals, and documents that are crucial to our nation's heritage. Many of these materials published after 1850 have already deteriorated or will eventually be endangered because of the high acid content of the paper on which they were printed. Poor handling, care, and storage accelerate their decay.

So numerous are the research resources at risk in our nation's libraries, so complex are the problems associated with saving them, we at the Endowment decided in 1985 to establish a special Office of Preservation to concentrate our activities and to draw attention to preservation. As we see it, efforts must proceed along many fronts at once, but always with an emphasis on coordination and management. National planning is essential, and so the Endowment encourages cooperation among libraries and archives, professional groups and organizations, state and local governments, foundations and other private funders to set forth effective strategies. The goal is to move forward in a way that ensures that limited financial resources are put to best use and that wasteful duplication of effort is avoided.

As far as books and periodicals are concerned, we at the Endowment are primarily interested in intellectual content rather than the volumes themselves. We have found that the best way to preserve that content is through microfilming. The process of selecting which volumes are to be microfilmed, of deciding which are vital for research, requires coordination and planning on a grand scale. The Endowment has been encouraging this approach through a number of grants. We have provided major funding to the Research Libraries Group (RLG) in Stanford, California, for example, to conduct a nationwide microfilming program of endangered books on American history and culture. RLG is coordinating the microfilming of about 45,000 titles at ten of the nation's largest research libraries. The project is significant not only for the scholarship that is being preserved but also for the cooperation the participating libraries have shown in ensuring against wasteful and needless duplication in microfilming. The Endowment also has supported national cooperative microfilming projects in other subject areas of interest to humanities scholars including the classics, East Asian studies, and Latin American studies. Similar projects in art history, foreign languages and literatures, and English literature may be undertaken in the future.

It is essential that information about what has been preserved on microfilm is widely known and available -- to scholars, of course, who will use these materials, but also to other preservation projects so that they do not duplicate what has already been filmed. The Endowment therefore urges its grantees to contribute a record of their work to national library data bases and other bibliographic resources. More specifically, we are supporting a major project of the Association of

Research Libraries to bring together in machine-readable form the National Register of Microform Masters, which, when completed, will make it easier for researchers and the staff of preservation projects to know what exists on microfilm.

Because newspapers chronicle the major events and everyday occurences that make up the fabric of our nation's past, they are a major research resource for scholars of American history and culture. Yet, until recently, it was often difficult for scholars to locate and use certain newspapers necessary to their research. To remedy this situation, in 1982 the Endowment launched the nationwide United States Newspaper Program to establish a central bibliogaphic record of all 250,000 American newspaper titles published since 1690 and to microfilm copies of the most historically important of these that are endangered. Through this program, now administered in our Office of Preservation, we make grants to individual state projects to survey, catalogue, and preserve newspapers held by institutions within their boundaries. Grants are also made to national libraries and other repositories to catalogue and preserve important titles in their holdings. This monumental undertaking has now involved twenty-five states, two territories, and eight national repositories. These projects collectively have brought over 60,000 titles into a national data base, making information about these newspapers accessible for the first time at more than 6,000 computer terminals in libraries throughout the country.

Mr. Chairman, I am happy to report that the Montana newspaper project has been one of the exemplary projects in our program. In fact, Montana is the first state to complete all phases of its activities. Under the guidance of Mr. Robert Clark at the Montana Historical Society in Helena, over 1,000 titles of newspapers held in Montana have been catalogued and entered into the national data base. Most of these newspapers have also been preserved on microfilm. While some of this work was accomplished before the NEH grant, Endowment funds of $126,181 allowed the project to come to fruition. This included $18,000 to match non-federal funds contributed to the project by third-party donors in Montana.

(Attached to this statement is a copy of a news release the Endowment made in January that describes in more detail the U.S. Newspapers Program. The Associated Press picked up the piece, and many newspapers across the country ran related stories. We hope this wide coverage will help stimulate third-party support for individual state projects.)

The nation's libraries must have specially trained and knowledgeable preservation personnel if our national planning initiatives are to be effective. Unless the number of persons who can organize and manage a major preservation program is increased, the number of institutions that can become involved in preservation will be limited. Indeed, only about twenty-five to thirty libraries now have established programs. Last month, the Endowment made a major award of $449,453 to the Columbia University School of Library Service to continue its training program for preservation administrators and conservators. Columbia's program, which the Endowment has supported

since it began in 1981, offers the nation's only formal curriculum in preservation administration. Under this program, libraries from across the country are invited to nominate personnel to attend the school to learn how to direct preservation programs at their home institutions; instruction is also offered in conservation techniques. The program has graduated 26 students to date; the Endowment's latest grant will help produce another 38 graduates over the next three years.

To complement Columbia's pioneering efforts, the Endowment has recently begun to explore the possibility of establishing other grant mechanisms for increasing the nation's supply of trained preservationists. We have also provided partial funding for a preservation training institute for archivists, under the direction of the Society of American Archivists and the Northeast Document Conservation Center, that will take place this June.

For the national coordinated preservation effort to move forward, it is necessary to heighten public awareness of the issues involved and to generate greater non-federal support. Accordingly, an Endowment grant of $150,000 to the Council on Library Resources has helped produce a documentary film, "Slow Fires," that should enlighten the general public and library professionals alike about the seriousness of the problem. The full one-hour film will be broadcast on public television; a shorter half-hour version is being prepared for educational and fund-raising purposes. These films should prove to be important tools for assisting our grantees, as well as others involved in preservation, in raising non-federal funding for their projects. Increasing private support for individual projects and programs is one of the cornerstones of the Endowment's preservation initiative. Through our matching grant mechanism, we have helped stimulate to date over $1.73 million in third-party donations to preservation projects funded by the Endowment.

I understand that the President's Committee on the Arts and the Humanities will also be submitting testimony to today's hearing on their efforts to increase financial support from the private sector for preservation activities. The President's Committee, acting in concert with the National Institute for the Conservation of Cultural Property, has established the National Committee to Save America's Cultural Collections to pursue this goal. I am encouraged by this initiative and look forward to working with the Committee to expand the base of private support for preservation.

Preservation, if it is to be successful and cost efficient, must involve commitment and cooperation. The libraries, archives, and other repositories that hold the endangered materials must demonstrate a commitment to saving their own holdings. State and local governments must show a willingness to preserve books and periodicals under their control. Foundations, corporations, and other private funders must be encouraged to contribute to the preservation of our intellectual heritage. The Endowment, for its part, will use its good offices to further these activities and to help in the effort of coordinating them. Cooperation on this scale will not be easy, but with so much at stake, surely we can achieve it.

NEWS

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FOR IMMEDIATE RELEASE:

HUMANITIES ENDOWMENT SUPPORTS PROGRAM TO PRESERVE U.S. NEWSPAPERS PUBLISHED SINCE 1690

NEH has granted $6.4 million for projects to date, including $1.48 million just announced for Arkansas, Colorado, New York, Ohio, Pennsylvania, and Wisconsin

WASHINGTON -- Twenty-four states and two territories now are involved in a long-range program funded by the National Endowment for the Humanities (NEH) to locate and preserve millions of newspapers and to catalogue in a national database an estimated 250,000 newspaper titles published in this country from 1690 to the present.

Humanities Endowment Chairman Lynne V. Cheney said that the United States Newspaper Program (USNP), a coordinated national effort conducted with the Library of Congress, is making three hundred years of the nation's news available to the public, in many cases for the first time.

To date, the NEH has awarded grants totaling $6.4 million to the USNP. Non-federal funds contributed to USNP projects amount to an additional $2.0 million.

"Few primary resources are more important for informing us about our past than our newspapers," said Cheney. "They are a continuing chronicle of the events, large and small, that woven together comprise the historical fabric of the nation, beginning with Publick Occurrences, published in Boston in 1690.

- More -

"Up to now there has been no comprehensive program for locating, cataloguing, and preserving the wealth of information in the nation's newspapers," Cheney added. "Now, through the United States Newspaper Program, many of the historical and cultural riches locked away in our newspapers are being brought to light.

"Thousands of newspapers have been located and catalogued for the first time and made available to scholars, students, genealogists and the general public. In many cases these newspapers also are being preserved for future generations of readers," Cheney said.

Cheney announced USNP planning grants for Arkansas ($6,072) and Colorado ($10,000). Planning grants allow project directors to survey and estimate newspaper holdings within their states and to develop long-range "implementation" plans for cataloguing and preserving the state's newspapers.

Cheney also announced implementation grants to New York ($258,668), Ohio ($169,349), Wisconsin ($131,613) and Pennsylvania ($805,602, of which $300,000 is being matched from private sources).

"One of the most exciting aspects of this program is that new newspaper titles and whole runs of old newspapers are being discovered," she said. "Project directors intensively survey their states, the word gets out that old newspapers are being sought, searches are made, and new material is found in garages, attics, cellars, newspaper offices, and city halls."

In fact, the increase between a state's first estimate of its newspaper holdings and the discovery of new material can be more than 50 percent. In Indiana, for example, researchers revised their estimate of titles from 3,200 to 5,500 as a result of new findings.

- More -

In the process of cataloguing newspaper titles, often those conducting USNP projects discover that entire runs of newspapers are in bad condition and must be preserved through microfilming. Preservation of newspapers is a vital facet of the USNP because so many newspapers, especially those printed after 1860, were printed on newspaper stock that is steadily deteriorating, according to Cheney.

Once newspaper titles are catalogued and those newspapers with the highest priority are microfilmed, information about them is entered into a national library database monitored by the Library of Congress and maintained through the computer facilities of the Online Computer Library Center (OCLC), Inc., in Dublin, Ohio. OCLC computer terminals now are located in more than 4,000 institutions nationwide.

Researchers can use the computer database from nearly anywhere in the country to locate a specific newspaper title. When titles are not known, researchers can locate newspapers geographically, by county or town, through printed or microform listings provided by each state project. Microfilm copies of selected newspapers can be ordered through inter-library loan services.

In addition to state projects, the Endowment has funded the cataloguing of newspapers at eight national repository libraries and also funded preservation at one of the eight. Each of these libraries has extensive newspaper collections containing titles from nearly all 50 states. Expenses for this total $2,120,964. This is part of the $6.4 million total which NEH has put into the program.

The National Endowment for the Humanities is an independent federal agency that supports research, scholarship, education and general audience programs in the humanities.

# # #

FACTS

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USNP SIDEBAR
1/15/87

INDIANA: ONE STATE'S EXPERIENCE WITH THE USNP

"Historians have an adage. 'No sources, no history.' In a great many cases this comes down to 'No newspapers, no history.'"

So says Walter Nugent, who holds the Distinguished Andrew V. Tacke History Chair at the University of Notre Dame. Nugent was an early advocate for Indiana's newspaper project.

The history of newspaper publishing in Indiana began in 1804 with The Indiana Gazette, a weekly published in Vincennes. Now, for the first time in its history, the state is able to do a comprehensive survey to locate newspapers and then catalogue and preserve them, according to Sally J. Rausch, project director and associate dean for technical services at the Indiana University Libraries in Bloomington.

Institutions participating with Indiana University Libraries include the Indiana Historical Society, the Indiana State Library, and the Indiana Cooperative Services Library Authority.

"Not surprisingly, those working on the Indiana Newspaper Project have found that there are many more newspaper titles to be catalogued than had been estimated originally," said Rausch.

She said that painstaking inventory work early in the project turned up a number of titles whose existence had been unknown. Researchers revised their estimate of titles from 3,200 to 5,500. They discovered, for example, that the present Banner Graphic in Greencastle had 32 ancestor newspapers between 1852 and 1970.

- More -

Many of these titles turn up as the public becomes aware of the USNP. Richard Dodd, a resident of Gosport, brought to the project's attention an 1885 issue of The Gosport Weekly Spy preserved among his family's papers for over a hundred years. The Indiana Historical Society re-examined its holdings and discovered the first issue of the Anti-Slavery Chronicle and Free Labor Advocate, published in New Garden in 1847.

Sometimes newspapers are found for communities that no longer exist. The project has catalogued the first issue of the Marble Hill Era, published in that southern Indiana community April 5, 1894.

Observes Marvin D. Williams, Jr., the principal cataloguer for the Indiana project, "Marble Hill no longer exists as a town. Its history is preserved for us only through its newspapers." Williams adds that the Era's motto was "Not for love, honor or fame, but for Cash."

In the process of locating and cataloguing old newspapers, researchers have found that many are in deteriorating condition and must be preserved. Their preservation through microfilming is being made possible by a number of substantial gifts toward the project, including ones from the state's legislature and its newspapers.

Gifts of $5,000 each have come to the project from Eugene S. Pulliam, publisher of the Indianapolis Star and the Indianapolis News, and Richard G. Inskeep, president and publisher of the Fort Wayne Journal Gazette.

"Many Indiana newspapers, ours included, have provided moral and material support to the Indiana Newspaper Project because we feel it is an important step in having available to future generations an almost unique record of the communities where newspapers were published," said Pulliam, a member of the Advisory Committee for Indiana's project.

- More -

Once the newspapers have been identified and where necessary preserved, they then become the tool of the researcher, the genealogist, the scholar, the journalist.

Newspapers are essential, as Howard Caldwell, an Indianapolis TV news anchorman, found in his research on the history of Indianapolis theater.

"Only through newspapers can I easily find what played at these theaters by using the advertisements and the printed reviews," Caldwell said. "Newspapers reveal much more than the obvious facts. They reveal attitudes, ethics and techniques on any given day."

# # #

FACTS

National Endowment for the Humanities
1100 Pennsylvania Avenue, N.W.
Washington, D.C. 20506

Public Affairs Office
Media Relations
(202) 786-0449

YEH-87-001-F2
USNP SIDEBAR
1/15/87

WHAT'S IN A TITLE?

History changes and sometimes newspaper titles do along with it.

That's one thing the U.S. Newspaper Program has shown.

According to David Hoffman, Director, Division of Library Services, State Library of Pennsylvania, the Pittsburgh Post- Gazette has undergone 11 changes of title since 1786 when it began publishing.

In contrast, the Bedford Gazette in Bedford, Pennsylvania, has been published from 1805 to the present without a title change, making it the longest lasting newspaper title in Pennsylvania.

# # #

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NEH-87-001-F3
USNP Facts
1.15/87

U.S. NEWSPAPER PROGRAM PARTICIPANTS

This state-by-state list reflects the NEH funds awarded to date in support of the USNP, the current status of each state's efforts with estimates of the number of titles to be catalogued, and the name, telephone number and institution for the state's project director.

ALABAMA. ($413,079) Cataloguing and microfilming. An estimated 5,000 titles to be located and recorded. Edwin C. Bridges, Director, Alabama Department of Archives and History, Montgomery, AL. 205/261-4361.

ARKANSAS. ($6,072) Planning. Michael J. Dabrishus, University of Arkansas Libraries, Fayetteville, AR. 501/575-5577.

COLORADO. ($10,000) Planning. Katherine Kane, State Historical Society of Colorado, Denver, CO. 303/866-4601.

DELAWARE. ($58,787) Cataloguing. An estimated 600 titles to be located and recorded. Harold D. Neikirk, Head Bibliographer, University of Delaware Libraries, Newark, DE. 302/451-2432.

GEORGIA. ($10,000) Planning. J. Larry Gulley, Assistant Librarian, Special Collections, University of Georgia Libraries, Athens, GA. 404/542-7123.

HAWAII. ($49,900) Cataloguing completed, with 476 titles located and recorded. John R. Haak, University Librarian, Hamilton Library, University of Hawaii at Manoa, Honolulu, HI. 808/948-7205.

INDIANA. ($333,163) Cataloguing. An estimated 5,500 titles to be located and recorded. Sally J. Rausch, Associate Dean for Technical Services, Indiana University Libraries, Bloomington, IN. 812/335-3403.

IOWA. ($221,239) Cataloguing. An estimated 6,500 titles to be located and recorded. Nancy Kraft, Director of Libraries, State Historical Society of Iowa, Iowa City, IA. 319/335-3916.

- More -

U.S. NEWSPAPER PROGRAM PARTICIPANTS

KENTUCKY. ($152,136) Cataloguing. An estimated 5,590 titles to be located and recorded.. Judy Sackett, Head, Periodicals-Newspapers-Microtexts Department, M.I. King Library, University of Kentucky, Lexington, KY. 606/257-8387.

LOUISIANA. ($9,994) Planning. Elsie S. Hebert, Associate Professor, Manship School of Journalism, Louisiana State University, Baton Rouge, LA. 504/388-2336.

MASSACHUSETTS. ($10,000) Planning. B. Joseph O'Neil, Supervisor of Research Library Services, Boston Public Library, Boston, MA. 617/536-5400.

MISSISSIPPI. ($171,700) Cataloguing. An estimated 2,100 titles to be located and recorded. Hadel Morgan, Director, Archives and Library Division, Mississippi Department of Archives and History, Jackson, MS. 601/359-1424.

MONTANA. ($126,181) Cataloguing and microfilming completed, with 1,032 titles located and recorded. Robert M. Clark, Librarian, Montana Historical Society, Helena, MT. 406/444-4787.

NEVADA. ($135,315) Cataloguing. An estimated 600 titles to be located and recorded. Robert E. Blesse, Head of Special Collections, University of Nevada-Reno Library, Reno, NV. 702/784-6538.

NEW HAMPSHIRE. ($9,115) Planning. John R. James, Director of Collection Development and Bibliographic Control, Dartmouth College Library, Hanover, NH. 603/646-3187.

NEW JERSEY. ($189,208) Cataloguing. An estimated 3,020 titles to be located and recorded. Lida Sak, Rutgers University Libraries, New Brunswick, NJ. 201/932-7513.

NEW YORK. ($268,668) Cataloguing. An estimated 6,500 titles to be located and recorded. Patricia Hallon, New York State Library, Albany, NY. 518/474-6971.

OHIO ($179,318) Cataloguing. An estimated 3,400 titles to be located and recorded. William G. Myers, Ohio Historical Society, Columbus, OH. 614/297-2531.

- More -

U.S. NEWSPAPER PROGRAM PARTICIPANTS

PENNSYLVANIA. ($1,216,061) Cataloguing and microfilming. An estimated 9,900 titles to be located and recorded. David Hoffman, Director, Division of Library Services, State Library of Pennsylvania, Harrisburg, PA. 717/783-5968.

PUERTO RICO. ($9,000) Planning. Luisa Vigo-Cepeda, Director of Special Projects and Economic Resources, University of Puerto Rico, Rio Piedras, PR. 809/764-0000.

TEXAS. ($215,623) Cataloguing. An estimated 5,000 titles to be located and recorded. Bobby D. Weaver, Archivist, Panhandle-Plains Historical Museum, Canyon, TX. 806/656-3146.

UTAH. ($115,582) Cataloguing completed, with 1,263 titles located and recorded. Robert P. Holley, Assistant Director for Technical Services, Marriott Library, University of Utah, Salt Lake City, UT. 801/581-7741.

VIRGIN ISLANDS. ($17,363) Cataloguing completed, with 97 titles located and recorded. Henry C. Chang, Department of Conservation and Cultural Affairs, Division of Libraries, Museums, and Archeological Services, St. Thomas, USVI. 809/773-5715.

WASHINGTON STATE. ($10,000) Planning. Jeanne Engeman, Washington Room Librarian, Washington State Library, Olympia, WA. 206/753-4024.

WEST VIRGINIA. ($185,319) Cataloguing and microfilming. An estimated 1,100 titles to be located and recorded. Harold M. Forbes, Associate Curator, West Virginia & Regional History Collections, West Virginia University Library, Morgantown, WV. 304/293-3536.

WISCONSIN. ($131,415) Cataloguing and microfilming. An estimated 2,200 titles to be located and recorded. James P. Danky, Newspapers and Periodicals Librarian, State Historical Society of Wisconsin, Madison, WI. 608/262-9584.

- More -

U.S. NEWSPAPER PROGRAM PARTICIPANTS: NATIONAL REPOSITORY PROJECTS

In addition to state projects, the Endowment has funded the cataloguing of newspapers at eight national repository libraries and also funded preservation at one of the eight. Each of these libraries has extensive newspaper collections containing titles from nearly all 50 states.

AMERICAN ANTIQUARIAN SOCIETY, ($425,794), Worcester, Massachusetts. Cataloguing. An estimated 13,000 titles to be located and recorded. Joyce Tracy, Newspaper and Serials Librarian. 617/755-5221.

CENTER FOR RESEARCH LIBRARIES, ($35,845), Chicago, Illinois. Cataloguing completed with 1,035 titles located and recorded. Karla D. Petersen, Director for Technical Services. 312/955-4545.

KANSAS STATE HISTORICAL SOCIETY, ($415,844), Topeka, Kansas. Cataloguing. An estimated 12,500 titles to be located and recorded. Eugene Decker, State Archivist. 913/296-4792.

THE NEW YORK PUBLIC LIBRARY, ($246,564), New York, New York. Cataloguing and microfilming. An estimated 6,000 titles to be recorded. Irene Percelli, Serials Department. 212/930-0639.

THE NEW-YORK HISTORICAL SOCIETY, ($298,316), New York, New York. Cataloguing completed, with 9,080 titles recorded. Stephen Ziets, Assistant Librarian for Technical Services. 212/873-3400. (ext. 22)

RUTGERS UNIVERSITY LIBRARY, ($140,000), New Brunswick, New Jersey. Cataloguing completed, with 3,000 titles recorded. Lida Sak, Rutgers University Libraries. 201/932-7513

WESTERN RESERVE HISTORICAL SOCIETY, ($207,689), Cleveland, Ohio. Cataloguing completed, with 3,920 titles recorded. Kermit Pike, Director of the Library. 216/721-5722.

STATE HISTORICAL SOCIETY OF WISCONSIN, ($350,912), Madison, Wisconsin. Cataloguing. An estimated 7,000 titles to be recorded. James P. Danky, Newspapers and Periodicals Librarian. 608/262-9584

# # #

NEWS

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NEH-87-012-N

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FOR IMMEDIATE RELEASE

LOCAL NEWS

ILLINOIS BECOMES 25TH STATE TO JOIN UNITED STATES NEWSPAPER PROGRAM

WASHINGTON, February 25 -- Lynne V. Cheney, Chairman of the National Endowment for the Humanities, has announced that Illinois has become the 25th state to join the United States Newspaper Program (USNP).

The USNP is a long-range program funded by the Humanities Endowment to locate and preserve millions of newspapers and to catalogue in a national database an estimated 250,000 newspaper titles published in this country from 1690 to the present.

Cheney announced a planning grant for $16,127 to the Illinois State Historical Library in Springfield. The grant will allow the library during the next 12 months to develop a plan to survey the newspaper holdings in Illinois, locate unknown titles, catalogue those titles, create a comprehensive list of Illinois newspapers, and establish priorities for microfilming the state's newspapers.

The project director for the USNP planning grant is Roger D. Bridges, assistant state historian at the Illinois State Historical Library.

"We are pleased that half the states in the nation now are involved in this important national program," said Cheney, "and we look forward to working with the remaining states in coming years." The Endowment began the USNP in 1982.

NOTE TO EDITORS: Complete details on the USNP are attached in a news release distributed in January.

# # #

Mr. WILLIAMS. Let's hear from Dr. Gregorian and then we will ask both of you to submit to questions.

Dr. GREGORIAN. Any one of us who uses books and paper is exposed to the problem of deterioration of paper. Looking at a four-day-old Washington Post, or a four-year-old paperback, they decay before our eyes. Millions of books, periodicals, manuscripts, and other materials have already been lost, or at this very minute, are on the verge of extinction due to ravages of time, pollution, use, misuse, and the very content of the paper itself. Almost everything published since the mid-nineteenth century has been printed on paper containing self-destructive acids. It is ironic that the production of cheap paper, which helped democratized the written word, also bore the seeds of its own destruction.

I testify before you today not just as the President of the New York Public Library, or as a member of the Commission on Preservation and Access, but as an historian as well. Our current struggle for the preservation of the endangered books, journals, periodicals and papers is urgent and the problems we face are awesome. Time is of the essence and national cooperation is an historical necessity. We must join forces and means. For the issue is not mere preservation of millions of brittle books, but rather the preservation of mankind's heritage, and that goes beyond the doors of any single library.

As we celebrate the 200th anniversary of our cherished Constitution, we must remind ourselves that celebration alone is not enough. We have an historical obligation to preserve our history, our culture, traditions—in short, the legacy of our forefathers, our national heritage, and our memory. The library stands as an act of honor to the past and a witness to the future, thus, it constitutes a visible judgment on both.

It is incumbent upon us as guardians of our Nation's heritage and humanity's legacy to speak out, to expand and accelerate an historical rescue operation in honor of the past and for the benefit of the future.

The question of preservation of our Nation's and humanity's record demands a sound plan, effective national and international cooperation, a massive infusion of funds, and the introduction and utilization of new scientific and technological tools.

In this domain the Federal Government has already shown great leadership. The National Endowment for the Humanities' Office of Preservation has been an excellent example of what a relatively small program can accomplish, by supporting training, conferences, microfilming, and other preservation projects.

I am glad that my distinguished friend as a historian is most familiar with problems of records, journals, and archives, and every sort of paper which carries seeds of its own destruction.

The Library of Congress, under the direction of Dan Boorstin and William Welsh has led the Nation and brought its active filming program and its research into better preservation methods. Still, in the face of this national crisis, I believe the Federal Government has yet a greater role to play among the array of sources committed to solving the problem, and that is in the area of preservation microfilming. Because when a brittle book is microfilmed, its con-

tents become accessible to the public, not only throughout the United States, but throughout the world.

This process is therefore not just an act of preservation, it is an act of democratization of access to information and knowledge as well.

I have here a brittle book, the only copy of its kind in the United States. It is about a small French town during World War I, and a major work describing the Battle of Marne. As a result of this being microfilmed, this is available now to all the libraries in the country and to all the scholars in the country. Before, we could not have mailed this to any scholar because it is almost a dead book. We have resurrected it through microfilming.

This microfilming is essential because, in my opinion, this democratization process will allow us for the first time to compensate for the fact that the vagaries of history on philanthropy led to the greatest book collections being built in only a handful of locations. In a sense, microfilming and preservation not only preserves, but democratizes knowledge and its access to all Americans in all our 50 States.

The subcommittee's request for testimony raised the question of the appropriate role of the Federal Government and other potential funding sources. The New York Public Library is an example of an institution where government initiatives and private philanthropy have joined to support a fine preservation program. In this country, our effort is second in size only to that of the Library of Congress.

In fiscal year 1987 we will spend over $3 million on our preservation activities resulting in over 260,000 items receiving some kind of preservation treatment. Our funding sources in this area are not stable, however, and we may be faced with having to preserve less in the future. Certainly, the Federal Government, in particular, the National Endowment for the Humanities, has already been farsighted and generous in their support of this effort. However, even though we have one of the largest programs in the Nation, we are still filming only 14,000 volumes each year.

We also have one of the oldest programs, having begun our filming effort over 50 years ago. In that time, we have filmed the equivalent of 500,000 volumes—hardly a dent when one considers that there are 26 million items in our collections.

I am not here, however, to urge more funding for the New York Public Library. The problem is more complicated than that, and no single institution can solve it on its own.

I am here before you on behalf of a major national effort to film more books and create a library of preserved titles for the future. Such a national effort, to be successful, must involve sustained support over several years. The New York Public Library would, of course, be a willing participant in such an endeavor.

The work that has already been accomplished by the library associations, the NEH and other Federal agencies, the Library of Congress, and most recently, the Commission on Preservation and Access of the Council on Library Resources has brought us to the point where we stand prepared to address this problem and its solution. Private, local and State support is being developed. We

know what we must do, and if we act now we can do it for less and save more.

I am always moved by the appeal of the United Negro College Fund: "A mind is a terrible thing to waste." I must remind you that we stand to waste the fruit of many minds, indeed, many cultures, if we hesitate in our response to this national crisis.

As custodians of the heritage of humanity, we have the historic and moral obligation as well as the opportunity to rescue the record of the past for the world of the future. Let us unite, and let us begin.

Thank you very much.

[The prepared statement of Vartan Gregorian follows:]

Testimony of Vartan Gregorian, President,
The New York Public Library
Subcommittee on Post Secondary Education
Representative Pat Williams, Chairman
March 3, 1987

Anyone of us who uses books and paper is exposed to the problem of deteriorating paper. Look at a four day old Washington Post, or a four year old paperback. They decay before our eyes. Millions of books, periodicals, manuscripts, and other materials have already been lost, or at this very minute, are on the verge of extinction due to the ravages of time, pollution, use, misuse and the very content of the paper itself. Almost everything published since the mid-nineteenth century has been printed on paper containing self-destructive acids. It is ironic that the production of cheap paper--which helped democratize the written word--also bore the seeds of its own destruction.

I testify before you today not just as the President of The New York Public Library, or as a member of the Commission on Preservation and Access, but as an historian as well. Our struggle for the preservation of the endangered books, journals, periodicals and papers is urgent and the problems we face are awesome. Time is of the essence and national cooperation is an

historical necessity. We must join forces and means. For the issue is not mere preservation of millions of brittle books, but rather the preservation of mankind's heritage, and that goes beyond the doors of any single library.

As we celebrate the 200th anniversary of our cherished Constitution, we must remind ourselves that celebration alone is not enough. We have an historical obligation to preserve our history, culture, traditions -- in short the legacy of our forefathers and our national heritage. The Library has always been not only a repository but a center of learning. The Library has been a bulwark of democracy. It constitutes a critical element in the free exchange of information which is central to our democracy. The Library stands as an act of honor to the past and a witness to the future, thus a visible judgment on both. For what will befall our political system if a majority of our people are ignorant of the ideals, traditions and purpose of democracy? "If a nation expects to be ignorant and free," wrote Thomas Jefferson, "it expects what never was and never will be." That is why it is incumbent upon us, as guardians of our nation's heritage and humanity's legacy, to speak out, to expand and accelerate an historical rescue operation in honor of the past and for the benefit of the future.

The question of preservation of our nation's and humanity's record demands a sound plan, effective national and international cooperation, a massive infusion of funds, and the introduction and utilization of new scientific and technological tools. In this domain the Federal government has already shown

great leadership. The National Endowment for the Humanities' Office of Preservation has been an excellent example of what a relatively small program can accomplish, by supporting training, conferences, microfilming, and other preservation projects. The Library of Congress, under the direction of Daniel Boorstin and William Welsh, has led the nation in both its active filming program and in its research into better preservation methods. Still, in face of this national crisis, I believe the Federal Government has yet a greater role to play among the array of funding sources committed to solving the problem, and that is in the area of preservation microfilming.

It is particularly appropriate that the Federal Government take on the responsibility of expanding the national capacity for preservation microfilming, for this is a process that makes books available throughout the nation. A book is filmed; a record of that fact is then entered into a national database (for example, through the Research Libraries Information Network, or RLIN), and a master negative, from which additional copies can be made upon request, is retained in perpetuity in a climate controlled vault. Thus, the knowledge in a book located at The New York Public Library, in such bad condition that it could not have been loaned or even copied on conventional machines, is now accessible to the public not only throughout the United States, but throughout the world. This process is therefore not just an act of preservation, it is an act of democratization of access to information and knowledge as well. We now have the opportunity to compensate for the fact that the vagaries of history and philanthropy led to the greatest book collections being built in only a handful of locations.

The subcommittee's request for testimony raised the question of the appropriate role of the Federal government and other potential funding sources. The New York Public Library is an example of an institution where government initiatives and private philanthropy have joined to support a fine preservation program. In this country, our effort is second in size only to that of the Library of Congress. In Fiscal Year 1987 we will spend over $3 million on our preservation activities resulting in over 260,000 items receiving some kind of preservation treatment. Our funding sources in this area are not stable, however, and we may be faced with having to preserve less in the future. Certainly, the Federal government, in particular the National Endowment for the Humanities, has already been far sighted and generous in their support of this effort. However, even though we have one of the largest programs in the nation, we are still filming only 14,000 volumes each year. We also have one of the oldest programs, having begun our filming effort over 50 years ago. In that time, we have filmed the equivalent of 500,000 volumes--hardly a dent when one considers that there are 26,000,000 items in our collections.

I am not here, however, to urge more funding for The New York Public Library. The problem is more complicated than that, and no single institution can solve it on its own. I am here before you on behalf of a major national effort to film more books and create a library of preserved titles for the future. Such a national effort, to be successful, must involve sustained support over several years. The New York Public Library would, of course, be a willing participant in such an endeavor. The

work that has already been accomplished by the library associations, the NEH and other Federal agencies, The Library of Congress, and most recently, The Commission on Preservation and Access of the Council on Library Resources has brought us to the point where we stand prepared to address this problem and its solution. Private, local and State support is being developed. We know what we must do, and if we act now, we can do it for less and save more.

I am always moved by the appeal of the United Negro College Fund, "A mind is a terrible thing to waste." I must remind you that we stand to waste the fruit of many minds, indeed many cultures, if we hesitate in our response to this national crisis. As custodians of the heritage of humanity, we have the historic and moral obligation as well as the opportunity to rescue the record of the past for the world of the future. Let us unite, let us begin.

Mr. WILLIAMS. Thanks to both of you.

Mr. Coleman.

Mr. COLEMAN. Thank you, Mr. Chairman.

Dr. Gregorian, as one who has sat in your institution and done work and research, I can only say what a great library you have.

Let me ask you and Ms. Cheney—you have given us a lot about the facts and made an impression on us, and you outline the kind of hit-and-miss type of operation we have now with some funds from the humanities, some funds from private sources in the effort to preserve endangered books.

I wonder if the purpose of why we are meeting here today is try to tie all this up into framing it in some fashion that either someone is going to be selected to select the books or manuscripts that need to be preserved and/or kept if we have to prioritize them, who is to do that? How are these decisions made?

Do you have any suggestions along those lines, because you have very fine statements, but you kind of leave us at the point of embarkation and I would just like to have you go a little bit further.

What do you think truly is needed for us to do as a committee here in the Congress, if you even feel we have something to do other than to make it a public issue and make public awareness?

Ms. CHENEY. I think that public awareness is a very great contribution that these hearings will make.

I come at this as the Chairperson of the National Endowment for the Humanities, and we see a very precise role for ourselves in this. Our role is to help build the infrastructure that has to be in place for a large and coordinated effort to take place.

I would probably not oversimplify to say that there are two main ways in which we are trying to build that infrastructure. One is in training preservationists, and the other is in setting forth model programs—for example, the RLG project I described to you that involves 10 research libraries.

I can't imagine one national plan to do all of this, but several groupings together of major research libraries, for example.

Another grant we funded that I think might provide a model for efforts along this line was to the American Philological Association. It brought together scholars in the classics with archivists and librarians to discuss which titles in classical studies between 1850 and 1918 needed to be preserved. The problem is so complex that one huge overarching plan may be overreaching.

What we need, though, are national efforts along several fronts in different subject areas involving different groupings of institutions, with all of them committed to the idea that whatever preservation effort is undertaken needs to be registered in some central source so that there won't be duplication.

Mr. COLEMAN. There have been some suggestions about a national commission. Do you have any thoughts or comments about that, either of you?

Dr. GREGORIAN. There is already a commission established by the Council on Library Resources, and the chairman of that commission will be testifying in the second panel. What they have done throughout the years, they have raised the consciousness. But now they have also established a possible effective mechanism to coordi-

nate their efforts—on the brittle book I am talking about now, because that is what we were asked to address today.

That Commission also has an Advisory Council, and has been in touch with the American Association of Universities, American Council of Learner Societies, Modern Language Association, and many of the associations throughout the Nation, including Research Libraries, including American Library Association—so there is effective sounding of how we should do.

The main thing is we cannot afford duplication of efforts, and we cannot afford also to procrastinate. The time is of essence and also effective utilization, as the Chairman of NEH mentioned, effective plan and effective utilization of resource is also important. None of us can be selfish in this.

What we are trying to do, and I would like to stress this, what is New York Public Library, what is Library of Congress, Yale or Harvard libraries, or University of California libraries, or any of the research or university libraries. We are trying to nationalize in a sense by democratizing our holdings—is we are not doing a selfish act in this by getting more money for our institutions —for the first time, preservation has taken a national dimension. What they will preserve in the Library of Congress or New York Public Library, Yale library, or any of them, becomes available for the first time, nationally, in multiple copies, which we could not have done before.

In order to do that we have to enjoy the confidence of not only research libraries, public libraries, but also the library profession itself. I am delighted as to how thoughtful this Commission has been on Preservation and Access. As a new member of it, I have been impressed with the depth of their discussions, their concerns, and most of the frank analysis of the difficulties facing us, because we have not done this before in such a massive case. But we are facing some 77 million volumes—they are volumes that are facing extinction. And unless we do something now to put our egos down and bring our national sense of urgency and cooperation up, we are going to harm our effort.

So to answer your question, we have cooperative mechanisms now that would deal with this one issue. We will need other cooperative mechanisms to deal with other issues.

Mr. COLEMAN. One final question, if I might, Mr. Chairman, to Ms. Cheney. I am interested in your newspaper program, and I note that right above Montana where Missouri would fall, there is no Missouri listing.

Ms. CHENEY. Now somewhere in all this paper that I am sitting up here with there is Missouri.

Mr. COLEMAN. Okay, my question is, is it a lack of interest on our part? But I would like to say we have the oldest newspaper continuing to be published west of the Mississippi—and I want Pat Williams to hear this—in Liberty, Missouri—and he knows where Liberty is—and probably the most historic thing that was ever reported was the first daylight bank robbery in our history by Jesse James, a local fellow. So I don't know if we want to preserve that, but I know that Pat Williams is really interested in Liberty, like I am, because that is in my district. Maybe we can get a grant for that.

Ms. CHENEY. I think, Congressman, that Missouri has just been waiting for the other States to show them? [Laughter.]

In fact, though, a proposal for the planning stage of a newspaper project in Missouri will be taken to our May council. A panel review has already been conducted on this project. I am not sure how much I am supposed to say about that panel review, but it was very positive, I will say that much.

Mr. COLEMAN. Thank you.

Mr. WILLIAMS. I would tell the gentleman from Missouri, if one can tell folks from Missouri anything. You see, I have been to Missouri. Under Title II-C of the Higher Education Act, that is strengthening research library resources, only Stanford, the University of California at Berkeley, and the University of Maryland received a larger grant than did the Missouri Botanical Gardens—so, Missouri is doing very well.

Dr. GREGORIAN. Mr. Chairman, if I may add—I have sent my son to study in graduate school in Missouri in order to preserve your newspaper.

Mr. COLEMAN. What can I say?

Mr. WILLIAMS. Mr. Martinez.

Mr. MARTINEZ. I am not sure I want to get into this. Besides that, I have got to confess my ignorance—like you, in talking about reading books and using this, and being a part of that industry, I really didn't realize that these books were deteriorating. I think you have a massive job of having to educate a lot of people, including myself. Like you, I never—in fact, when I first saw the information packet that Chairman Williams, brittle books, I immediately thought of something like glass, or something that broke. They do get brittle, they just fall apart—I can see that they are falling apart by your arm there.

I got to thinking then in terms of that memo and wondered well, aren't the people that are originating the books, don't they reprint the books every so often—and I got to thinking of a lot of things like that, just goes to show how simple people that really aren't familiar with the problem think, in terms they think.

Then I started thinking about the other thing—generally when we hold hearings up here it is because we expect that we educate Congress and Congress takes the responsibility and does something, and generally it is providing funds. So the immediate idea came to my mind, the first question to either of you that might know—and incidentally, let me say Bar Ev to you—has anybody done anything to find out how much it would cost, made an estimate, of the books that generally need to be saved. I know all the books haven't been determined yet. But generally, there has to be some idea of how many need to be saved, without getting into it as deep as you probably will after you get started.

How many books are there? What is the cost of saving those books, nationwide?

Ms. CHENEY. That is a very good question.

The Council on Library Resources has come up with some estimates that we have been following along with. There are approximately 76 million volumes published since 1850 that are endangered. But this includes multiple copies of individual titles.

So, you start with 76 million volumes and you factor in what is going to happen over the next 20 years and you bring the total up to 114 million volumes that are endangered.

Then you estimate that because of duplication, you actually have 11.4 million titles. You see, you estimate that there will be repetition of titles in there, so you are left with 11.4 million discrete titles that are at risk, or will become endangered over the next 20 years.

Then you estimate that about a third of those are significant enough to save—3.8 million volumes we are talking about. About half a million volumes have already been preserved. So that leaves you with 3.3 million significant, discrete titles—I'm sorry, I didn't mean to say volumes a minute ago—significant, discrete titles that will be in need of preservation over the next 20 years.

Again, we are dependent upon people to whom we give grants to come up with figures for the amount of money needed to save these. The Council on Library Resources estimates that in order to film 3 million volumes over the next 20 years, $358 million is needed, or about $15 million annually.

Mr. WILLIAMS. Would the gentleman yield?

Mr. MARTINEZ. Yes.

Mr. WILLIAMS. I asked the gentleman to yield because on that point the Report of the Commission on Preservation and Access they call brittle books cites this on page 8, referring to Mr. Hayes, quote:

"His conclusion, based on saving only one-third of the titles now at risk, or to become at risk in the next 20 years, was that $384 million would be required to preserve the content of 3.3 million volumes."

Have they transposed the word "volumes" and "titles" there? We do need an accurate for the purpose of our hearing record——

Ms. CHENEY. Yes, they have.

Mr. WILLIAMS [continuing]. We need an accurate——

Ms. CHENEY. I don't mean to speak for the Council on Library Resources, but according to the logic, as I understand it, they have indeed transposed "volumes" and "titles" at that point. Of course, the titles will be volumes.

Mr. WILLIAMS. All right. Greg wants to leave now.

The problem is obviously enormous and we are just trying to grasp the enormity of it with some degree of specificity. I don't mean to split hairs, but this is a pretty large hair that needs splitting.

I thank the gentleman for yielding. The gentleman has another minute remaining on his time.

Mr. MARTINEZ. You mean you used up all my time? [Laughter.]

Just let me say that I don't think that is an astronomical sum for the purpose it is intended, number one. But I don't think that the Federal Government should be expected to come up with the total amount. I do think as New York has already done—and my next question is to you, Dr. Gregorian, how many other entities, large entities, like the New York Library, or even smaller ones, across the country are into this preservation work now?

Dr. GREGORIAN. Most of the research libraries are, it's that degree of their work. Because the Research Library Group, which

contains as large as 38 major research libraries, the Research Library Group cooperates in this effort. Yale has a preservation program, Berkeley has a preservation program; even small, some small places have. But when we call preservation, you have to know they are talking two different things. One is microfilming, and the other, unique materials, which the cost is up to $400. When you are talking about this others, $368 million is based on microfilming brittle books at an average cost of $65. But preservation includes not merely microfilming but it is archival as well as other material, which we did not discuss. But most institutions have one sort or another.

What we are proposing here, my colleagues and I, is to coordinate this effort so there would not be duplication. If we preserve something in the New York Public Library or if the Library of Congress preserves something, automatically everyone is notified that we have done that. For example, if we save El Diario, it automatically goes on the computer data base notifying all the research libraries that we have done that, so they can do something else now.

We have this effort, but the States, as later you will hear—and I don't want to preempt my colleagues' testimonies—the State of New York is doing a tremendous job, and other States are undertaking new initiatives in this; some private institutions with private funds will do it. Our $3 million, very little of it comes from various public sources. We are raising private sources, but we have to replenish that source every year.

So why we are here today is not to ask the Federal Government to replace those funds. We are here for increasing—keeping our effort, but increasing that effort throughout the Nation in a coordinated fashion.

So New York is doing—and California has started doing its share now. Illinois is doing. There is a great deal of national awareness what I call about yellow spring, because that's what it is, this corn flake spring that we are getting in the form of brittle books .

Mr. WILLIAMS. The gentleman's time has expired.

Mr. MARTINEZ. Just one last question, please.

Mr. WILLIAMS. All right.

Mr. MARTINEZ. There was a while back a program that started, "Adopt a Book," in some areas, where a person who wanted to support his local library would pay a dollar—it was a dollar stated but it could be more——

Mr. GREGORIAN. We have that program at New York. We are saying if you pay 35 to $50 you can adopt a book. But the book is—the price consists of purchase, shelving, and cataloging. It does not include——

Mr. MARTINEZ. Preserving.

Mr. GREGORIAN [continuing]. Preserving. If we include preserving cost, the total cost of a book may be $130. That's why many people are upset when they bring books to the library and say I have free books for you. And librarians are reluctant to take because the audience does not see, or the person who brings does not see this hidden cost. So that's what I would like you to know.

Mr. MARTINEZ. Thank you.

Mr. WILLIAMS. As all of you know, the Congress is, this year, celebrating its 200th year—this is the 100th Congress—and it is our

understanding that in all that time, Congress has had only one professional librarian as a member of this body, and that is the gentleman from New York, Mr. Owens.

The Chair recognizes the gentleman.

Mr. OWENS. Thank you, Mr. Chairman.

Let me begin by thanking you for holding these hearings. There is a great deal of need to increase the public awareness of this problem, including the awareness of Congressmen.

I also want to thank and welcome both of our witnesses, but particularly, I would like to welcome my hometown librarian, Dr. Gregorian. The New York Public Library has always been a great library and always a leader in the library field, but under Dr. Gregorian particularly, I want to congratulate him on the degree to which he has raised the level of public awareness about the library—the awareness of millionaires and the awareness of the average person down the street, in terms of the total range of problems faced by the Library and the kinds of benefits it could give.

I would like to just begin, Dr. Gregorian, you clarified to my colleague before, and you also showed your sensitivity, I think, in terms of no other chief librarian has ever, I think, undertaken to preserve El Diario. It is very important in New York City.

You clarified the difference between a microfilming operation with preserving the contents of the book and the preservation of the book itself. My question relates to the relative cost. What percentage of the activity to preserve knowledge and what is contained in books should be devoted to the actual preservation of materials, the actual book itself, and the relative cost there? How do they justify it? And how are those decisions made?

Can you give us a few examples of what qualifies for the preservation of the actual physical specimen of the book versus to go ahead and put it on the microfilm and letting that be enough?

Dr. GREGORIAN. My colleagues later will answer that, Major Owens, but let me just give a superficial fast answer to that.

The resources dictate our choices, unfortunately. In this movie that was made yesterday—Slow Fires—I hope you will see it, sponsored by NEH, among others—I mentioned the fact that librarians are put in an unfortunate position of serving as French generals in charge of triage, because we would like to save a lot. But at the same time we don't want to become parochial in our choices to save our region versus the rest of the Nation, because in scholarship and in cultural, the unity of our heritage is important. So that is one consideration.

We do it across the library. Each division curator who collected, whose predecessors collected the material, who know the collections—they come forward saying, which are the immediate endangered, dying patients? So we are taking care of immediate death problem while putting some others in nursing homes, and some others in ambulatory care, while waiting for their turn. So, therefore, we are only preserving what may be lost, what may be the last act. Or as an artifact—the book as an artifact and the book for its content.

We have done 14,000 such titles, last year. And it is across throughout the library, from Jewish division, to Slavic division, to bird collection, to every collection of your public library—every cu-

rator designates on the basis of their knowledge which ones have to receive immediate attention.

Mr. OWENS. What role does deacidification have in this process?

Dr. GREGORIAN. The deacidification process is for those materials that have to be preserved for design and other contents, or artistic and other intrinsic qualities. Out of $3 million, roughly, we spent $1 million, or $890,000 to $900,000 on microfilming; the other on preserving materials due to cheap glue, binding, and other problems are deteriorating—but are unique books.

Mr. OWENS. So those that you preserve physically, what percentage of those use the deacidification process, or need that?

Dr. GREGORIAN. I cannot give you the exact percentage, Major Owens, because I do not know the exact percentage. But I will mention this: there are documents like maps that we deacidify as one item, and there are books that they are deacidified page by page.

We have been waiting for the, hopefully, successful undertaking of Library of Congress to bring massive deacidification of books. But we do not have the capacity at this stage to do it.

Mr. OWENS. Recently the New York Times had an article on a book cleaning project.

Dr. GREGORIAN. Yes.

Mr. OWENS. It had a lady in an apron standing there wiping books.

Where in the continuum is that in terms of book preservation? Was she just wiping the dust off for the health of the patrons, or is that important?

Dr. GREGORIAN. No, no, not exactly. What we did, for 75 years, New York Public Library's 88-mile shelving did not enjoy temperature and humidity controls. We air conditioned now the stacks of the New York Public Library as a major act of preservation. When we did that, we did not want 75 years of dust to remain in the books. So thanks to a company—gave us a grant—we are dusting, that's number one; but we are also examining the health of each book.

Furthermore, there is one other thing we are doing. Since card catalogs were a great innovation at the time, but any scholar or any non-scholar who removed a card from that card catalog, a book was lost forever. Now we are also checking our holdings versus our catalogs.

So the cleaning—what you read was merely about dusting, but you did not read the other aspects of it.

Mr. OWENS. It was about 20 cents per book, I think it was, for the dusting.

Ms. Cheney, just one question. I didn't quite get the answer you gave in terms of the disparity between the figures that you give on the preservation—the dollars needed for preservation versus the Council of Library Resources.

Could you just tell me again? I don't think the figures are high at all when you consider that one aircraft carrier costs $3.5 billion—billion—dollars, I don't think these figures are very high in terms of what they are preserving. But I would like, just for clarification, why you think the discrepancy in the figures?

Ms. CHENEY. I think the discrepancy was over a word rather than a figure. Is that correct, Congressman Williams?

Mr. WILLIAMS. Volumes versus titles.

Ms. CHENEY. The discrepancy was over title versus volume rather than a discrepancy with the Council on Library Resources, whose figures I am using.

There was no discrepancy unless I misheard, except in that—ah, I see—there was $386 million versus $358 million. Perhaps it has to do with volumes already done.

I want to go back for a second to Greg's war metaphor though—the idea of being the French general conducting triage. It seems to me—and I am coming along here as a relative outsider myself, though I have used the books, the problem has only been in the forefront of my mind for eight or nine months now.

It seems to me that one of the most useful things that this congressional hearing can accomplish is stopping the war. Greg is talking about binding up the patients and putting them in different forms of care. But as we speak, the war continues, and every day Dan Boorstin gets 6,000 more bodies brought into the Library of Congress .

The publishing industry simply must become, it seems to me, more aware of this problem, more aware of its own responsibilities for preserving the Nation's heritage.

The film, "Slow Fires," that Greg has mentioned and NEH helped fund makes his point with great clarity. It will, if problems of supply and demand and the right kind of paper can be solved, cost no more to produce a book on paper that is acid-free than it now costs to produce a book on acid paper.

I think that it is very important that members of the publishing community enter into this dialogue and begin to accept their responsibilities for stopping the war.

Mr. OWENS. I have time for one more question. I would like both of you to address it if you wish.

There has been some controversy about the DEZ program. It has also been pointed out that the Canadian deacidification program has been a great success and the Library of Congress has had a lot of problems.

Do you have any comment on the Library Journal's editorial calling for the dumping of DEZ?

Dr. GREGORIAN. I always defer that to a librarian of Congress since they are the ones who——

Mr. OWENS. I will ask him the question later on. I just wondered if you had any——

Dr. GREGORIAN. I think whenever you make an experiment of this sort, you are liable to make errors as well as success. I have been waiting eagerly for some successful testing of a massive deacidification program. The origin is not that important as the act itself.

So our hope for the last several years has been that the Library of Congress should take leadership in this on behalf of the Nation. I think they have tried their best to accomplish this. They have had mishaps, about which they will talk about. But nothing in life, including launching of rockets and so forth, are you immune to disaster.

Mr. OWENS. You are using the wrong analogy.

I understand NASA is involved in the problem but——

[Laughter]

Mr. OWENS. Do you care to comment, Ms. Cheney?

Ms. CHENEY. No, I think that Dan Boorstin will be able to explain deacidification with much greater skill than I could.

Mr. OWENS. Thank you very much. No further questions.

Mr. WILLIAMS. Dr. Gregorian, will you expand some for us on your idea concerning the filming as a preservation tool versus, if I may use that in a competitive sense—that may not be an appropriate to phrase it for you—versus the deacidification process?

Dr. GREGORIAN. Well, filming is immediate. We have this tested technology and it is available, it is economical at this stage, and we have to pursue while waiting for another technology . If another technology comes up within the next several years that is more effective than filming, do this. But not all the books need to be preserved, to deacidify.

If we have at the New York Public Library 4,000 telephone directories, we don't have to deacidify them. We can microfilm them for their content.

But if we have this book, the only kind that I mentioned—if it is only of its kind in the country, we may have had to deacifidy this to keep it in the book form. But the books cannot wait for our debate and, therefore, that is one of the reasons we have tried for the last 50 years, and we continue to microfilm, in order to preserve immediately while waiting for better technologies to develop.

Mr. WILLIAMS. Ms. Cheney, in your testimony—and, by the way, the entire testimony from both of you and our other witnesses as well will be entered in their entirety in the record—in your testimony, Ms. Cheney, you say, quoting now: "I understand that the President's Committee on the Arts and Humanities will also be submitting testimony to today's hearing on their efforts to increase financial support from the private sector for preservation activities."

Later in this paragraph, quoting again: "I am encouraged by this initiative and look forward to working with the Committee to expand the base of private support for preservation."

Is there a continuing appropriate role for expanded public support, recognizing, of course, that the private sector gets its money from the public too—but setting aside that major difference, and it's major—is there, in your judgment, a role for expanded public financial support for this effort?

Ms. CHENEY. You will hear today from people who have hold of different parts of this elephant. The particular part of the elephant that I have hold of I tried to explain in my testimony—we see NEH's role as providing the infrastructure and as establishing model programs.

What growth we see coming over the next few years should be very slow. When you are building infrastructure, a great infusion of money upfront is not useful—various libraries have to designate the people in charge of these projects, they have to decide to have a slot for someone who will be their preservationist. So, from my own particular perspective, the role of public funding should be one that expands slowly.

Mr. WILLIAMS. We thank both of you very much for your good counsel this morning.

Dr. GREGORIAN. Thank you very much, Mr. Chairman.

Ms. CHENEY. Thank you.

Dr. GREGORIAN. Thank you, Major Owens.

Mr. WILLIAMS. I will ask the next panel of four witnesses—Mr. Boorstin, Ms. Huxley, Mr. Haas, Mr. Weber—to please come forward.

I want to note, of course, something I think I perhaps overlooked and that is our two previous witnesses—Chairperson Cheney, of course, is the Chair of the National Endowment for the Humanities, and was here representing that Endowment, and Dr. Gregorian is the President of the New York Public Library.

The witnesses before us now are the Honorable Daniel Boorstin, Librarian of Congress. He is accompanied by Mr. Peter Sparks of the National Preservation Program Office of the Library.

Carole Huxley is the Deputy Commissioner for Cultural Education, New York State Department of Education.

Warren Haas is the President of the Council on Library Resources, and he is representing that Council as well as the Association of American Universities and the American Council of Learned Societies.

David Weber is Director of the University Libraries, Stanford, and is here representing the American Library Association and the Association of Research Libraries.

Mr. Boorstin, it is nice to have you with us. I want to take a moment to tell you that we all very much enjoyed your challenging remarks at the Conference at Greenbriar, and it is nice to see you here. Please proceed.

STATEMENTS OF DANIEL J. BOORSTIN, THE LIBRARIAN OF CONGRESS, LIBRARY OF CONGRESS, ACCOMPANIED BY WILLIAM J. WELSH, DEPUTY LIBRARIAN OF CONGRESS, AND PETER G. SPARKS, DIRECTOR, PRESERVATION OFFICE, LIBRARY OF CONGRESS; CAROLE F. HUXLEY, DEPUTY COMMISSIONER FOR CULTURAL EDUCATION, NEW YORK STATE DEPARTMENT OF EDUCATION; WARREN J. HAAS, PRESIDENT, COUNCIL ON LIBRARY RESOURCES, ON BEHALF OF THE COUNCIL ON LIBRARY RESOURCES, THE ASSOCIATION OF AMERICAN UNIVERSITIES AND THE AMERICAN COUNCIL OF LEARNED SOCIETIES; AND DAVID C. WEBER, DIRECTOR, UNIVERSITY LIBRARIES, STANFORD UNIVERSITY, ON BEHALF OF THE AMERICAN LIBRARY ASSOCIATION AND THE ASSOCIATION OF RESEARCH LIBRARIES

Mr. BOORSTIN. Thank you, Mr. Chairman.

It is a pleasure to appear here to speak about one of our most pressing national problems, a problem that confronts the future scholarship—our place in the world.

Across the country, in libraries and learned institutions, in every State of the Union, books are becoming so brittle that their contents can only be salvaged by microfilming and then only if funds are available soon.

These are books published since the mid-19th century when, as Dr. Gregorian has mentioned, the rise of democracy and literacy increased the demand for books and for paper. Then the growing paper industry substituted chemically-treated woodpulp for rags.

In the Library of Congress alone, a 1984 survey estimated that some 3 million books were in a condition that would not survive normal use. Every year about 70,000 more volumes move into this dangerously brittle state. Once a book becomes brittle, Mr. Chairman, it cannot be deacidified. The only way, then, to save its contents is by microfilming .

Before 1967, the Library of Congress devoted its microfilming resources to newspapers. Since then, we have made a concerted effort to microfilm books and bound serials that could not be used without destroying their content.

Although we have microfilmed some 113 million pages from about 400,000 volumes we are still not keeping pace with the rate of deterioration. We see the same menace across the Nation. Including the microfilming done at the Library of Congress, we estimate that only about 100,000 volumes a year of the 76 million brittle volumes are receiving attention.

We know the problem. How can it be solved? Of course, no one institution can take sole responsibility for preserving our entire national heritage. We want to share the burden of preservation, and we must. And we can, Mr. Chairman, if the additional resources that are now requested are made available for a cooperative program of microfilming brittle books.

Through the Library of Congress, librarians have long worked together, that is, since the early 1900s, to provide the National Union Catalog which lists the holdings of all major North American libraries. This tool is now automated. By using it to access master microfilm negatives and to assign responsibility for preserving each class of materials, we can then build a national collection of microfilm masters. Copies then can be made available for a small copying fee to libraries in all 50 States.

The Library of Congress is glad to cooperate with other research libraries in this country toward fulfilling a national policy.

The Deputy Librarian of Congress, William J. Welsh, who is here today, Mr. Chairman, led this effort here and abroad, and has enlisted foreign support through the International Federation of Library Associations.

Meanwhile, we have been experimenting with optical disk technology as a means of preservation, that is, by making it possible to use materials at minimal risk.

I would like to mention also, Mr. Chairman, in view of some of the comments that have been made before—and this is something that Congressman Owens, as a professional librarian, will especially understand. We at the Library of Congress have been concerned very much, not merely with preserving books by microfilming, but with a program of preventive maintenance, and that really is what the deacidification program is mainly—it should not be confused with the program of microfilming.

Here at the Library of Congress, for the last two decades, we have been experimenting with a process to deacidify books, and we are optimistic about the proposed mass book deacidification facility,

which is going to be built at Fort Detrick, Md. It is supported by appropriated funds.

Pursuing the comment of Congressman Owens, I would like to observe that this is a pioneer project, and like all pioneer projects, is subject to risks. It is necessary for someone to take the risks and we have been willing at the Library of Congress to take those risks, we have kept the Congress informed of the progress. But it is really impossible to tell how these programs will work out, especially on the large-scale, without testing them, and we have been making that effort.

So this is a problem of the pioneer, I suggest, Mr. Chairman.

But now we need to alert legislators, colleges, university administrators, and city councils to this crisis and the preservation of our culture. The National Endowment for the Humanities under the leadership of Lynne Cheney has been doing an excellent job and we want to join in this.

Two hundred years ago this May, some remarkable men gathered in Philadelphia to draft our Constitution, which was based on a faith in man's ability to govern himself when properly informed, and in the faith to man's insatiable appetite for knowledge.

Today we are talking about access to knowledge and the diffusion of knowledge, and ways to keep that access and diffusion open.

In 1765, John Adams wrote: "Let us cherish the means of knowledge. Let us dare to read, to think, to speak, and write . . . let every sluice of knowledge be opened and set a-flowing."

Our task now is to use modern technology and the resources of the public and private to pursue John Adams' dream.

I have with me today, Mr. Chairman, Peter Sparks, the Director of the Library's Preservation Office, and also William J. Welsh, who is the Deputy Librarian of the Congress, and has led our efforts in this regard. They will be glad to answer any technical questions.

Thank you for this opportunity.

[The prepared statement of Daniel J. Boorstin follows:]

Statement by Daniel J. Boorstin, The Librarian of Congress
Before the
Subcommittee on Postsecondary Education
Committee on Education and Labor
U.S. House of Representatives
March 3, 1987

Mr. Chairman and Members of the Subcommittee:

It is a pleasure to appear here to speak to one of the most pressing problems confronting the future of scholarship in this country and in the world. Across this nation, in libraries and learned institutions in every state of the union, books are becoming so brittle that their contents can only be salvaged by microfilming and then only if funds become available soon. These are books published since the mid-19th century when the rise of democracy and literacy increased the demand for paper. Then the growing paper industry substituted chemically-treated wood pulp for rags. In the Library of Congress alone, a 1984 survey estimates some 3 million books in a condition that will not survive normal use. Every year about 70,000 more volumes move into this dangerously brittle state. Once a book becomes brittle, the only way to save its contents is by microfilming.

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additional resources are available for a cooperative program of microfilming brittle books.

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Peter Sparks, Director of the Library's Preservation Office is here to answer any technical questions the Subcommittee may have. He has a brief statement.

Mr. WILLIAMS. Thank you.

I also note, for the record, that you have accompanying you a long-time friend of mine, Adoreen McCormick, and we welcome her as well to this hearing.

Thank you very much, Mr. Boorstin.

Ms. Huxley?

Ms. HUXLEY. Thank you, Mr. Chairman.

I am grateful to have the opportunity to address you this morning on a problem which New York recognizes as a critical one, and into which it is investing some $2 million annually—but which it knows, State and institutional programs, even in partnership with existing Federal resources, are not adequate to solve.

There is some irony in New York's being the first to pass legislation to provide preservation funding because New York was also the first, perhaps, to understand what it means to suffer irretrievable loss of its history and heritage.

In 1911, the New York State Library was one of the great research libraries of this country and of the world—it ranked among the top 20 in the world.

Books, manuscripts, and the New York State Government Archives were all housed in the State Capitol, and on the night of March 29th, 1911 it all went up in flames. We lost, of the total, 450,000 volumes, all but 7,000 of the total 270,000 manuscripts, all but 80,000.

I brought you this morning to see—we deal every day in our labs still, our conservation lab, with the results of that fire. These are the Van Rensselaer Manor papers document our Dutch past, which we retrieved from the fire with the help of the New York Public Library and the Library of Congress who came up in 1911 to help us try and sort this out. But gone was the bulk of our colonial record in New York State, the early record of our democracy as documented in New York, Indian records, comprehensive collections in law and medicine.

The New York State Library today is a fine research library, but it will never be the institution that it once was. We lost too much, and so did history lose too much, and so did the documentation of our democracy.

Today a similar calamity is taking place in the New York State Library, the New York Public Library, the Library of Congress, research libraries, the National Archives—all our great research repositories.

Here is the new kind of catastrophe taking place. This is the superintendents of the poor convention in 1873. It is a very important book. It is an ordinary book. It is not a rare book. It is an ordinary book but it documents our understanding of social welfare policy in 1873, and we have had inter-library loan requests for this book in the past year—three or four of them. It has been microfilmed.

Our research houses are on fire, as the NEH and Mellon Foundation-produced film Slow Fires has shown. All at the same time, we have to sound the alarm, try and fight the fire, and save things. That is what our job is right now.

New York is trying with legislation that was passed in 1984 to address it from the State's perspective. These funds are partially to join in a partnership with the 11 major research libraries of New

York State and for cooperative programs. A quarter of the money is available for other institutions who have collections of special significance. But the bulk of the money goes to a few institutions .

New York sees these funds as a judicious use of public tax dollars to serve the people broadly—because strengthening our research resources also strengthens our public and private higher educational systems and our information base. These systems are important to the continued economic, social well-being of New Yorkers, and we can't ignore the clear threat to their future anymore than we would stand and watch our Adirondack wilderness get chopped down one more time.

At the same time, our State legislation quite appropriately focuses within our own borders for direct and immediate benefit to our citizens in its own educational institutions, State and local government, hospitals, and laboratories. Only with the help of NEH and the Mellon Foundation have we, who administer these State funds, been able to spend some time trying to shape the program so that it can be a model for efforts throughout the country. But our State funding goes to support the work within the State.

NEH has also supported a three-year training and planning project from which comprehensive document preservation recommendations have come: Our Memory at Risk—there are some copies of it over there—and that has set our New York State agenda, still to be funded, in that regard for us as well.

These Federal funds have done a lot to help us, also through the NHPRC and Title II-C, our understanding of the preservation challenge and ability to develop and test strategies. However, these Federal agencies respond to applications and are somewhat reactive in nature, although they have tried to shape these guidelines with great wisdom.

But what is missing on a Federal level and what we cannot provide at a State level is a strong focus national perspective in leadership with authority in funding to manage a coherent and comprehensive operation.

National leadership is needed to establish and support a program of education for the public for research institutions and for historic record repositories. Without broad interest and concern of public officials, we cannot, are not likely to find the resources or the national will to meet this serious problem in a substantive way.

Secondly, on a national level we need to set consistent policies and standards for preservation and access. We need to provide national financial support for preservation of those collections—there are 11 within our State that we focused on nationally, we have to focus on those few collections which really form the base of our national research.

Third, we need to support research and testing of preservation technology, which is not sufficiently attractive to commercial enterprises—I think we need to step that up.

We need to assure sufficient resources to the Library of Congress and the National Archives to meet their own preservation problems, which are massive, and to share their solutions with the rest of us.

Finally, there is a great educational opportunity coming up in the proposed White House Conference on Libraries and Informa-

tion Services for 1989. Federal action cannot wait for these, nevertheless, prominent on the agenda of that White House Conference—which I hope will happen—should be Federal/State/private partnership to address preservation.

These recommendations all require action at your level, not ours, and without it our efforts will be much less effective. They may be fragmented; we are going to duplicate; there will be overlap.

I hope that in 75 years the successors of Daniel Boorstin and Vartan Gregorian aren't coming to you with the sad story I started with about the loss of their collections. I might just point out that unless something is done about the government and paper, this is what the hearing record is going to look like in another 75 years—are commission records from 1918, which are a very important resource.

[The prepared statement of Carole F. Huxley follows:]

Prepared Statement of Carole F. Huxley, Deputy Commissioner for Cultural Education, New York State Education Department

Chairman Williams, distinguished members of the House subcommittee on Post-Secondary Education, good morning. I am Carole Corcoran Huxley, Deputy Commissioner of Cultural Education for the New York State Education Department. I am also a member of the Commission on Preservation and Access. My responsibilities in New York include the New York State Library, the New York State Archives, the New York State Museum and administration of State and Federal programs of aid for libraries, library systems and public broadcasting.

I am grateful to have the opportunity to address you on the problem of the quiet destruction of this nation's research base, and commend your farsightedness in holding these hearings. This forum is particularly important because at the heart of the problem of brittle books and of the crumbling of our documentary heritage, is the need for public awareness and for education.

Just as research materials are the educational base for this nation, education about preservation -- for the public, the research community, librarians, library and university trustees, legislators, governors, the Federal Government -- is crucial if these important materials are to be preserved. Public officials must understand what is at stake if there is to be sufficient support to sustain the effort. Federal, state and private agencies must have the will and the commitment to attack the problem simultaneously on several fronts if it is to be gotten under control. One of the most important roles on the national level is that of coordinating all these different approaches.

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I would like to be somewhat parochial this morning, briefly describing the New York situation -- our sense of the problems, the small steps we have begun to solve them, and those areas which we believe can only be satisfactorily addressed on the national level. Because my own experience relates to both research library and archival collections, I will speak to the related but distinct preservation needs of historical records, as well as books.

New York was the first State to pass legislation to provide preservation funding on a continuing basis for major research collections. For those of us with ties to the New York State Library, such legislation has a bittersweet connotation.

In 1911, the New York State Library in Albany was one of the five greatest research libraries in this country and one of the twenty greatest collections in the world. It included many rare and irreplaceable volumes, the whole record of colonial and state government from the Dutch onward and comprehensive collections in the areas of law and medicine. There were a total of 450,000 volumes and 270,000 manuscripts. The Library was housed in the State Capitol in March of 1911 although it had been scheduled to move into new quarters in January. Construction delays had prevented the move.

In the early morning hours of March 29, 1911, a fire broke out in the Capitol Building. When it was brought under control, 7,000 books and 80,000 manuscripts remained. In effect, the library was gone but for duplicative volumes stored elsewhere.

In the earliest example I know of the importance of public/private partnership for preservation, a trustee of The New York Public Library came to help direct the library salvage operation. And he persuaded an expert conservator from the Library of Congress to help us restore what could be saved.

I have described a tragedy with which we still cope daily in our preservation lab. The New York State Library is a major research library today, about to accession its two millionth volume, but it will never be the institution it once was, nor can any other library duplicate the collections lost in that disaster. We lost too much. And so did history -- and so did scholarship. And so did the documentation of public policy in a state of pivotal importance to the democratic experiment.

Today we have the same kind of calamity taking another shape in the New York State Library and in The New York Public Library and in the Library of Congress and in our great research libraries and archives across the country. Our past, our ideas and imagination, our written achievements are being quietly consumed in a silent and invisible conflagration. Acid paper, heat, cold, dampness, dryness, and simple use are the elements of this quiet catastrophe. I very much hope that a Congressional Committee 75 years from now will not be hearing testimony from Dr. Gregorian's and Dr. Boorstin's successors about the lost greatness of their institution's collections.

I ask your indulgence to extend this "fire" analogy a bit further.

Our research houses are already on fire. And in many ways we are faced now with that kind of question. But, at the same time, we have yet to sound the alarm so that it can be heard, and even when it is heard, the equipment available to fight the fire is (technologically speaking) at the bucket brigade level. All at the same time, we have to make the alarm heard, find something to put out the fire and also immediately save what we can.

In New York, perhaps because we know too well about loss of our research base, the State is beginning to address this problem in partnership with the eleven major research libraries in the State and with those others which possess unique collections of special significance.

New York State currently has a $2 million preservation program, begun with $1.2 million of the total $57 million in State aid to libraries that was appropriated by the State of New York in fiscal year 1984-85. The preservation legislation represented the first State Government support for such activity anywhere in the nation, and was presented as part of the 1984 Library Omnibus Bill, which was supported by the New York library community, including the New York Library Association.

However, the conservation piece of New York's legislation was not being called for by many in our library or research community. Many other more visible and immediate problems absorbed -- and continue to absorb -- their attention. Resolution C-9 of the 1979 White House Conference on Libraries proposed the government/private preservation partnership from

which our legislation had taken its cue, but essentially our preservation legislation was an exercise in Regents' and legislative leadership.

The bulk of that money, $990,000, was earmarked for support of preservation programs in the eleven major research libraries of New York (Columbia, Cornell, New York State Library, New York University, University of Rochester, Syracuse University, The Research Libraries of The New York Public Library, and the State University centers at Albany, Binghamton, Buffalo, and Stony Brook). $200,000 was set aside for discretionary grants on a competitive basis to all other libraries and other repositories which hold collections of special or unique research importance. Legislation enacted in 1986 increased the annual total appropriation to $1,840,000, with the increase including $350,000 for cooperative programs among the eleven major research libraries and an additional $300,000 for discretionary grants (thereby providing $500,000 annually for discretionary grants).

The purpose of these funds is not to assume responsibility for an institution's preservation program, but to join in a partnership with the institutions themselves. This is a judicious use of public funds because our research resources serve the people of New York as a whole and advance the public welfare. Our public and private higher education system and our information base are important to the economic and social well-being of the State, and we cannot afford to see them diminished any more than we would stand by to allow the destruction of our

magnificent Adirondack wilderness.

Our documentary heritage is similarly precious and the threats to its preservation are similar, as well. Frank Burke, the Acting Archivist of the United States, recently noted that 1987, the Year of the Constitution's Bicentennial celebrations, "is, if anything, a celebration cast in paper." He went on to say:

> "Our constitutional system rests on reams and reams of paper that have been produced in order to promote and defend, or attach or change the Constitution.... One does not understand racial issues by looking at a school bus, or the war powers of the President by visiting Tonkin Gulf, or the issue of the franchise by seeing long-gowned women chained to the White House fence. These momentous issues, reaching to the very soul of the American system, are understood only through the documents that they have created -- the essays, tracts, legal briefs, legislative debate, court hearings, and the vox populi in the press. We are, after all, a nation built on paper, not tradition."

I have described the State portion of New York's partnership, but what is an institution's own responsibility for its books, manuscripts, archival records? An institution's primary responsibility is to serve its own constituency, therefore:

1. It should establish the institution's preservation priorities, through cooperation among bibliographers,

collection specialists, and those responsible for preservation;

2. Preservation should be made a more integral part of the library or archives structure and should be factored into budgets and into outside funding requests.
3. It should be aware that preservation is not just the responsibility of the library or archives within a larger institution, but of the institution as a whole;
4. It should keep abreast of regional and national developments and concerns in preservation, and attempt to mesh its internal needs with the needs of the larger preservation community.

But the State/institution partnership is not sufficient, we have found. In our experience, we soon discovered the need for a larger partnership with federal and private agencies. The applications we received demonstrated a desperate need for more preservation education.

There was no dearth of excellent materials in need of preservation attention, but many of the projects set forth to help preserve them lacked important information. For instance, few of the proposed microfilming projects mentioned adherence to the pertinent standards of the American National Standards Institute. One project to preserve photographs requested copy prints, yet made no provision for master negatives. In many cases there was not evidence of a clear understanding of the difference between what is valuable as an artifact and what is

valuable for the information it conveys. Several projects for conservation treatment of items of considerable research value did not propose to make the content of the items more accessible through reformatting. There also seemed to be a lack of understanding about how to select a conservator and how to consult with a conservator about appropriate treatments.

We did not have the staff or the money for preservation, planning, education and technical assistance. We also knew that to expend wisely the dollars we did have, we needed consultation and guidance from national experts on standards, policies, and strategies. We were very much aware that because our program was the first state program, it was important that it be a model. Why did our state funding not provide for planning, education, technical assistance and national coordination? Quite understandably, states tend to focus within their own borders and, quite appropriately in the view of most taxpayers, to think about direct immediate results within the state.

The National Endowment for the Humanities, understanding the programs's importance as a potential model, provided support, which the State and the Mellon Foundation are matching, for those necessary components. NEH has similarly supported a three-year "New York Conservation Administration training and Planning Project" in the area of unique research materials, particularly our documentary heritage. Its influence on our preservation efforts has far outstripped the level of its funding because the funds have been used to support planning, coordination, technical

assistance and model preservation programs. The Federal funds have done much to advance our understanding of the preservation problem and of various strategies. Likewise, the National Historic Publications and Records Commission has supported a National Survey of Preservation Needs in State Archives, very recently completed. These federal agencies, however, are somewhat reactive by nature, responding to proposed initiatives. Although through skillfully crafted guidelines these agencies have attempted to set directions for the national effort, what is missing is clear national leadership-authority and money.

National leadership is needed to:

1. Establish and support a program of education for the public, for research institutions, and for historic records repositories. Without broad interest and concern on the part of public officials, we are not likely to find the resources and the national will to meet this serious problem in a substantive way.
2. Set consistent policies and standards for preservation and access which find consensus throughout the research community. Provide national financial support for preservation of those collections which constitute our national research base.
3. Support research and testing of preservation technology not sufficiently attractive to commercial enterprises.
4. Assure sufficient resources for the Library of Congress and the National Archives to meet their own vast

preservation problems and to share the solutions they develop with other libraries and historical records repositories. Federal granting agencies need better coordination within the context of an overall national plan.

5. Support for Senate Joint Resolution 26 and House Joint Resolution 90, calling for a 1989 White House Conference on Libraries and Information Services. Prominent on the agenda should be a federal/state/private partnership to address preservation of research collections.

All of these recommendations require action at the national level and without it, efforts like New York's will be less effective because strategies from institution to institution and from state to state will remain fragmented, with the constant likelihood of both duplication of effort and egregious omissions.

States must, nevertheless, swing into action now. Maine and New Jersey now have programs, and California is funding preservation in its university system. Each state should develop a statewide plan for preservation of library materials and unique research resources. Under an NEH grant, New York has been able to develop such a plan for unique research resources, and our recent effort may be a useful model. The report of that project, Our Memory at Risk, analyzes conditions and needs, sets goals and objectives for the future and discusses areas of responsibilities -- citizens, state government, and institutions -- for meeting

preservation needs.

Finally, we need to focus on the future. We need to make sure that the problem does not just keep growing into the future. For instance, we need to encourage the broader use of long-life paper. We need to make sure that new facilities have proper environmental controls. We need to continue research. And we need to step up educational efforts -- for scholars, librarians, archivists and the general public. The fire alarm must be sounded so that all can hear it for we all must carry water to put out this fire.

Mr. WILLIAMS. Thank you for wise and vivid testimony.

Mr. Haas?

Mr. HAAS. Thank you, Mr. Chairman, and members of the subcommittee. I am Warren Haas, President of the Council on Library Resources, which I should note is an operating foundation established in 1956, initially funded by the Ford Foundation, and now funded by a number of private foundations.

I am responding to your invitation to speak, not only as President of the Council, but speaking on behalf of the new Commission on Preservation and Access. You have a description of that Commission in the package we have sent to you. It has been established with the assistance of the CLR for the specific purpose of dealing with the problem of brittle books, a generic term that Chairperson Cheney pointed out includes published items of all kinds—books, journals, newspapers, pamphlets. All of these are at risk because the paper on which they are printed has deteriorated and become brittled. The books themselves, as items, cannot be saved, but their contents can.

If this matter is left untended, the record of our accomplishments as a people and a Nation will be jeopardized.

I note that I also appear as an indication of the dimension of interest and concern with the endorsement of the American Council on Learned Societies and the Association of American Universities—organizations that represent many of our leading scholarly societies and research universities.

The public understanding of the importance of the idea of preservation has been remarkably expanded in recent years. We are learning to protect the best of what we have built, we are learning to use our national resources wisely, and to preserve the record of what we, as individuals, have created, though, and accomplished.

The cause of effective preservation requires common sense, a balance between all-encompassing aspirations and reality, and persistence. It is an area of importance for members of a mature society, where the needs and interests of the present are informed by the record of the past—the exceptional and the ordinary alike.

The record of human thought is found in many places, but it is most visible in the libraries and archives that are responsible for collecting, protecting, and making accessible the written and published accounts that make up our history.

Those institutions face a continuing challenge to accomplish their mission with very limited resources. Given the magnitude of their assignment, libraries have done reasonably well. The current and historical collections of our finest general and specialized research libraries are exceptional resources, both for public use and for academic scholarship—teaching and research. But there are now clear signs that the past is losing out, largely because of the sheer magnitude of the brittle books problem. I will underscore that sheer magnitude. We will come back to that, I think, because it is that characteristic that dictates the time and the need for special attention.

Preservation is a word, I suppose, suggests a kind of static state. But as an idea, it is alive and dynamic in libraries and archives. It is also a simple concept, but it is complex in execution.

As others have pointed out, we need to deal with inherited problems while reducing the prospect that they will be repeated in the future. Thus, those concerned with recorded information are looking to new methods of storing and preserving information to supplement print on paper.

Standards for permanent and durable paper have been developed and are slowly influencing paper making and publishing. Storage conditions for collections are improving because we now understand that the way collections are housed affects their condition.

The prospects for deacidifying existing books in at least some libraries are promising, because for materials that are still sound, physical deterioration will be significantly slowed.

Preservation is becoming an international enterprise, as important libraries in many other countries actively join the cause. In this country, private foundations, universities, and some States play powerful roles. As has been noted, the Federal Government—especially through the Library of Congress, the National Library of Medicine, the National Endowment for the Humanities—has played an important part in shaping the campaign, taking leadership in specific areas and stimulating participation in others.

It is this past experience, our collective success in some important areas, the growing public understanding of the need for action, and our new comprehension of the character and complexity of the issues, that now make it possible to address the brittle books problem. Simply put, the leading general research libraries, with constructive involvement of many others, are ready to join forces and create what will be, in effect, a national collection of preserved materials, permanently and fully accessible for use by all Americans.

The stage is in fact set for that collaboration—we are not at the beginning, there is much that has been accomplished—the management capacity is taking shape; it has been demonstrated that the necessary production facilities can be established. For example, two major preservation microfilming facilities now exist. One started in part with Council funds, the other more recently by the Exxon Education Foundation. A capacity for continuing technical research exists, much of it in our national libraries.

Thanks to the National Endowment, the pool of trained technical people and skilled professionals is growing; and active support from university administrations and the community of scholars can in fact be enlisted.

The bibliographic structure that we have talked about that is essential to both identify and locate preserved items is largely in place, and the service facilities that will deliver the end product to those who need it either exists now or can be developed in phase with program growth.

But until there is reasonable assurance of funding in sufficient amounts and over a period long enough to do this specific job, preserving the content of brittle books, little more will happen. The members of the team have in a sense moved to the line in this contest against time. We need now the signal that will start the race.

A copy of the final report of the Committee on Preservation and Access is attached to my statement. It is incorporated also in brittle books.

The Committee was established to shape the general outline of an active program to deal specifically with the brittle books problem. Their report characterizes the problem itself, poses the set of principles that will guide the work, and proposes a basic organizational structure.

That structure is now in place. The Commission on Preservation and Access—a group of nine individuals, three of them who have appeared here today—Lynne Cheney, Bill Welsh, and Vartan Gregorian—is now hard at work. They are largely funded by a number of universities. The work of the Commission has been funded by 9 or 10 universities, plus some foundation assistance. A National Advisory Council on Preservation, with representatives from nearly 20 organizations, has been formed.

The composition and purpose of both organizations are described in this brochure that we sent copies to you and that accompanies this statement. We clearly understand that there is no single approach to the work that needs to be done. Many organizations and institutions will take part, but their efforts can now take place in the context of a single set of standards and against a common backdrop.

Our oldest, largest research libraries will, at least initially, be the focus of this activity simply because it is there that the brittle books problem is most prominent, and especially in humanistic and historical subjects, and the concentration of titles at risk is the highest.

But at heart, the participation of these libraries reflects their sense of service to the Nation, because by drawing on the collections they have assembled and maintained over the years, their investment will become, in fact, a public asset.

The costs will be substantial and will, in the end, be governed by the number of brittle books that are actually saved. Careful analytical studies—and I can talk about these if you wish—are now under way to refine earlier work but they suggest that one-fourth of all volumes now in our general research libraries and a large number of specialized collections are brittle and already at risk. Even if we succeed in saving the content only of a third of the titles in those volumes, we will be dealing with at least three million items.

The purpose of the work we have set for ourselves is to protect the human record as it is and has been. In this cause, we have the advantage of starting with collections that have been assembled by librarians and scholars over more than a century; we already have what has been judged important at many points in time.

Librarians and scholars of the present have demonstrated through some of the demonstration projects that Chairperson Cheney noted that they can in fact plot a preservation strategy that will represent the past fully, not selectively.

The Commission, as part of its assignment, will keep track of progress and establish a review procedure to make sure that gaps are filled and corrections made.

But in the main, the path of preservation will be set by hundreds of people in many different settings, which is the best assurance that the past is truly reflected for future use.

This is a remarkable opportunity for many elements of our society—those that are concerned with saving at least a portion of our past for use by those yet to come. Success will be measured in many ways, direct and indirect, obvious and subtle.

Failure, if we fail, will be visible and simple. We do not ask that the Federal Government take over and do the job. We do ask that it find an appropriate way to join in the task as a constructive partner and to do its share.

Thank you.

[The prepared statement of Warren J. Haas, and related material follow:]

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COMMISSION ON PRESERVATION AND ACCESS

Hearing on "Brittle Books," March 3, 1987, before the

U.S. House of Representatives Subcommittee on Post-Secondary Education

Statement of Warren J. Haas, President, Council on Library Resources

Billy Frye, Emory University, Chairman • Millicent Abell, Yale University • Herbert Bailey
James Govan, University of North Carolina at Chapel Hill • Vartan Gregorian, New York Public Library
Kenneth Gros Louis, Indiana University • Carole Huxley, New York State Education Department
Sidney Verba, Harvard University • William Welsh, Library of Congress

Mr. Chairman and members of the Subcommittee:

I am Warren J. Haas, President of the Council on Library Resources (CLR). I am responding to your invitation to speak for the Commission on Preservation and Access, which has been established with the assistance of CLR for the specific purpose of dealing with the problem of brittle books, a generic term that includes published items of all types--books, journals, pamphlets, newspapers--that are at risk because the paper on which they are printed has deteriorated and become brittle. If this matter is left untended, the record of our accomplishments as a people and a nation will be jeopardized. I note that I also appear with the endorsement of the American Council of Learned Societies and the Association of American Universities, organizations that represent many of our leading scholarly societies and research universities.

The public understanding of the importance of the idea of preservation has been remarkably expanded in recent years. We are learning to protect the best of what we have built, to use our national resources wisely, and to preserve the record of what we, as individuals, have created, thought, and accomplished. The cause of effective preservation requires common sense, a balance between all-encompassing aspirations and reality, dedication, and persistence. It is an arena of importance for members of a mature society, where the needs and interests of the present are informed by the record of the past--the exceptional and the ordinary alike.

The record of human thought is found in many places, but it is most visible in the libraries and archives that are responsible for collecting, protecting, and making accessible the written and published accounts that make up our history. Those institutions face a continuing challenge to accomplish

their mission with very limited resources. Given the magnitude of their assignment, libraries have done reasonably well. The current and historical collections of our finest general and specialized research libraries are exceptional resources, both for public use and for academic scholarship, teaching, and research. But there are now clear signs that the past is losing out, largely because of the sheer magnitude of the brittle books problem.

Preservation, as a word, suggests a static state. But as an idea, it is alive and dynamic in libraries and archives. It is also a simple concept, but it is complex in execution. We need to deal with inherited problems while reducing the prospect that they will be repeated in the future. Thus, those concerned with recorded information are looking to new methods of storing and preserving information to supplement print on paper. Standards for permanent and durable paper have been developed and are slowly influencing paper making and publishing. Storage conditions for collections are improving because we now understand that the way collections are kept affects their condition. The prospects for deacidifying existing books in at least some libraries are promising, because for materials that are still sound, physical deterioration will be significantly slowed.

Preservation is becoming an international enterprise, as important libraries in many other countries actively join the cause. In this country, private foundations, universities, and some states play powerful roles. The federal government--especially through the Library of Congress, the National Library of Medicine, and the National Endowment for the Humanities--has played an important part in shaping the campaign, taking leadership in specific areas and stimulating participation on many fronts.

It is this past experience, our collective success in some important areas, the growing public understanding of the need for action, and our new comprehension of the character and complexity of the issues, that now make it possible to address the brittle books problem. Simply put, the leading general research libraries, with constructive involvement of many other libraries, are ready to join forces and create what will be, in effect, a national collection of preserved materials, permanently and fully accessible for use by all Americans. The stage is set for that collaboration: the management capacity is taking shape; it has been demonstrated that the necessary production facilities can be established; a capacity for continuing research exists; the pool of trained technical people and skilled professionals is growing; and active support from university administrations and the community of scholars can be enlisted. The bibliographic structure that is essential to identify and locate preserved items is largely in place, and the service facilities that will deliver the end product to users either exists or can be developed in phase with program growth.

But until there is reasonable assurance of funding in sufficient amounts and over a period long enough to do this specific job, little more will happen. The members of the team are moving to the starting line in this contest against time. We need now the signal that will start the race.

A copy of the final report (April 1986) of the Committee on Preservation and Access is attached to this statement. The Committee was established to shape the general outline of an active program to deal with the brittle books problem. Their report characterizes the problem itself, poses the set of principles that will guide the work, and proposes a basic organizational structure.

That structure is now in place. The Commission on Preservation and Access is hard at work, largely funded by a small number of universities. A National Advisory Council on Preservation, with representatives from nearly twenty organizations, has been formed. The composition and purpose of both organizations are described in the brochure that accompanies this statement. We understand that there is no single approach to the work. Many organizations and institutions will take part, but their efforts can now take place in the context of a single set of standards and against a common backdrop. Our oldest, largest research libraries will, at least initially, be the focus of activity, simply because it is there that the brittle books problem is most prominent, especially in humanistic and historical subjects, and the concentration of titles at risk is highest. But at heart, the participation of these libraries reflects their sense of service to the nation, because by drawing on the collections they have assembled and maintained over the years, their investment will become, in fact, a true public asset.

The costs will be substantial and will, in the end, be governed by the number of brittle books that are saved. Careful analytical studies now under way to refine earlier work suggest that one-fourth of all volumes now in our general research libraries and a large number of specialized collections are brittle and already at risk. Even if we succeed in saving only a third of the titles those volumes represent, we will be dealing with at least three million items.

The purpose of the work we have set for ourselves is to protect the human record as it is and has been. In this cause, we have the advantage of starting with collections that have been assembled by librarians and scholars over more than a century; we already have what has been judged important at many points

in time. Librarians and scholars of the present have demonstrated that they can plot a preservation strategy that will represent the past fully, not selectively. The Commission, as part of its assignment, will keep track of progress and establish a review procedure to make sure that gaps are filled and corrections made. But in the main, the path of preservation will be set by hundreds of people in many different settings, which is the best assurance that the past is truly reflected for future use.

This is a remarkable opportunity for many elements of our society--those that are concerned with saving at least a portion of our past for use by those yet to come. Success will be measured in many ways, direct and indirect, obvious and subtle. Failure, if we fail, will be visible and simple. We do not ask the federal government to take over and do the job. We do ask that it find an appropriate way to join in the task as a constructive partner and to do its share.

Report Of The Committee On Preservation And Access

The Brittle Books Problem

The human record, in every form, is fragile. Ancient civilizations are reconstructed from fragments; the work of even the most distinguished authors is often scattered and lost; published and archival records of governments, institutions, and organizations tend to lose integrity and utility with time. New formats for information storage, whether magnetic or photographic, are not immune from their own set of hazards. In short, permanence is a relative term and preservation of the record of the past, on even the most selective basis, is a continuing process.

Books have, for centuries, been the principal means for carrying the past to the future and even in the computer era they remain a remarkably useful invention. Like all other media, books are fragile, but the printing of books in editions and the dispersion of copies has compensated for the hazards that face individual volumes. When a single copy is lost, another can usually be located. Even now, books printed three hundred or four hundred years ago, often in very small editions, can still be found in multiple copies.

The assurance implicit in duplication is less comforting, however, for many books printed after 1850. All paper, and thus every book, deteriorates over time. The rate of deterioration varies greatly and is a function of such factors as the chemical characteristics of the paper, the mechanical construction of the volume, storage conditions, and intensity of use. The paper most often used for books manufactured since the mid-nineteenth century tends to be acidic and, for that reason, less stable and durable than earlier, alkaline paper. Careful analytical work undertaken in several leading libraries confirms that books printed on acidic paper begin to deteriorate rapidly fifty years or so after publication.

Because of the size and composition of their collections, old, large, general research libraries are especially hard hit, but no library of record is immune. Typically, one-fourth of the volumes in such libraries are described as brittle—that is, the paper breaks after one or two double folds of a page corner. Further, up to 80 percent of the books in those collections are acid and, without

preventive action, eventually all will become brittle. The Library of Congress estimates that 77,000 volumes in its collection move from the "endangered" to the "brittle" category each year.

The problem, overwhelming as it already is, is unlikely to be contained in the near term. The great majority of books published, nationally and internationally, are still on acid paper. While standards for permanent and durable book paper have been set, their acceptance by leading commercial publishers is slow in the U.S. and even less visible abroad. It is difficult to interest the papermaking industry in the cause of preservation, since only a very small portion of paper made in the United States is used in books.

There is no absolute solution to the preservation problem and no single approach to follow. Use of more acid-free paper, worldwide, will bring long-term help. Deacidification of existing books while they are still physically sound will slow deterioration and extend their useful life. Many individual volumes of intrinsic value (e.g., those with important marginal notes; those that are exceptional examples of bookmaking) should be safeguarded as artifacts. But for the greatest portion of books that are already brittle, reproduction of content is the only realistic course of action; otherwise, an important segment of the human record will be lost forever. How this might best be done is the subject of this report.

General Observations

Committee members considered many aspects of preservation, but concentrated especially on identifying the fundamental issues and the essential characteristics of an effective national undertaking. The starting point was to understand better the magnitude of the brittle books problem. Several research libraries have independently surveyed their collections and others have determined costs of at least some aspects of microfilming and other replication methods, but there has been no comprehensive study of the magnitude, costs, and benefits of a comprehensive program. Robert Hayes was asked to assemble and analyze known information and to provide estimates where needed, in order to reach a reasonable assessment of the dimension of the brittle books problem. His conclusion, based on saving only one-third of the titles now at risk (or to become at risk in the next twenty years) was that $384 million would be required to preserve the content of 3.3 million volumes. (Because so much data concerning costs, duplication of titles among libraries, and benefits are questionable or lacking, Hayes is now engaged in a research project that will provide more facts and new evaluation.)

Despite the inadequacy of much of the basic information, the inescapable fact for the Committee was the great size of the problem and the high cost of

a solution. While the cause of preservation alone might justify the effort and expense, it was the recognition that assured access to the most important publications produced over 150 years of history is the true objective and the real justification for a national program. The goal of brittle books preservation is not to reconstitute the collection of each library as it now is, but to create, in effect, a new national library of preserved materials. With that assertion as a base, the Committee went on to establish and encourage action on key program requirements.

- Wide understanding of the preservation problem is necessary if sufficient and continuing financial and institutional support is to be secured.

  With this objective in mind, several Committee members have taken part in academic and library meetings, the Interim Report has been widely distributed, and an hour-long film on preservation has been commissioned for possible use on public television and for distribution to many kinds of audiences nationally. Ultimate responsibility for building and maintaining an informed body of supporters rests with many library, archival, and academic organizations.

- Preservation work should employ the most effective technology available at any given time.

  The work of preservation cannot wait for the "ideal" technology. Production of microfilm copies of text done to established archival standards is still the accepted approach. Preservation is labor-intensive, and there seems little prospect that alternate technologies will reduce initial costs. Prospects are good that optical/digital disk replication systems may offer cost and service advantages in terms of producing, on demand, copies of individual titles, given fully acceptable assurances of the stability and permanence of such disks. It does seem essential that attention be paid to converting master copies of text from one format to another (film to disk, for example), should that prove desirable.

  Given the projected costs and the continuing requirement for program credibility, preservation work must be carried out as economically as possible, in line with realistic qualitative standards. (A detailed study of microfilming practices and procedures is now under way to determine whether personnel costs might be reduced without unduly compromising the quality of microform master copies.)

- An efficient bibliographic system is required.

  Given the dispersion of preservation work, the underlying bibliographic record system must provide accurate and timely information,

identifying and locating master copies. The bibliographic system can also be the source of management information for those concerned with the level, distribution, and characteristics of preservation activity. The same bibliographic information must be widely and easily available if the requirements for accessibility are to be met. A review of policies and procedures of the primary bibliographic services indicates that the structure for effective bibliographic control is essentially in place. Ways to make records for existing master copies of film more generally available are being considered. Bibliographic reporting of current preservation work seems improved, but more timely distribution of such reports nationwide is needed.

- Preservation priorities need additional consideration.

The Committee considered the topic of preservation priorities but reached no specific conclusions, perhaps because there are so many items and categories of obvious importance. In the end, items to be replicated will be identified by subject and preservation specialists working in many libraries and archives. The goals and priorities of those individuals (and their institutions) must be known and subject to review by scholars, research faculty, and an informed public. It is anticipated that priorities will become apparent rather than being imposed. Many factors will be influential: copyright constraints, unit costs, present condition, anticipated demand, and personal interests. The key to success over time seems to be the thoughtful involvement in the selection process of a large number of informed individuals. There is much that will never be preserved, simply because time will run out. There is also much that is not worth the cost and effort of preservation. It seems probable that the matter of priority will be resolved by the evidence of action. It seems less important to assign ranks of importance from the top down than it is to put aside for now the items and categories that are unlikely to meet the test of time.

- Systematic and purposeful collaboration is essential.

The brittle books problem will not be solved by accident. The scale is too great, the cost too large, and the setting too complex. A joining of forces, not unlike that which has characterized the gradual development of a comprehensive and standardized bibliographic system, is needed. More than anything else, the projected cost of preservation demands program efficiency and credibility. Targets must be realistic, results visible, and benefits unquestioned. Even though the work will be done cooperatively, success in preservation will be dependent on the performance of each institution. Ideally, the program to preserve brittle books should improve the methods and enhance the principles of effective collabo-

ration among libraries and research institutions, for while they are individually distinctive, they have a common cause.

Organization

Meeting the conditions for success requires action on two fronts—establishing an organizational structure that will assist and support the libraries directly involved, and developing and promoting a funding plan.

In the final analysis, the work of preservation must be done by the individuals and institutions responsible for building and safeguarding the collections that, taken together, *are* our primary record. Meeting that responsibility is difficult because the present is always more demanding than the past. The accelerated deterioration of collections, only recently acknowledged, turns a difficult assignment into an impossible one under present circumstances. Unless new and extraordinary measures are devised and taken, the steady erosion of important collections, already begun, will quietly continue, and the possibility of accurately reconstructing important segments of public events and private accomplishments will slowly but inevitably decline.

Improving prospects for success will not come by shifting responsibility. Rather, enlisting new forms of help for those who are responsible is the most promising course of action. That help must be of a special kind: it must support without dominating; it must offer continuity of interest and participation; it must amplify skills and resources already at work and make present progress more visible; it must seek to strengthen existing capabilities and add new ones as needed; it must provide the sense of a common purpose that is essential to increasing financial support; and it must find ways to measure progress and promote efficiency. In short, a way must be found to add cohesion and force to existing efforts and aspirations.

To provide a structure that has these capabilities and, in addition, is able to adjust to changing needs and conditions, the Committee has encouraged the formation of two new bodies: a Commission on Preservation and Access and a National Advisory Council on Preservation, whose members will be designated by supporting organizations. The Commission, with appropriate staff support, must develop and carry out the plans and procedures that will enable libraries and preservation specialists to expand and integrate present preservation work. The Advisory Council is required to promote participation of all disciplines and to encourage support by involved and interested academic and professional organizations. It is also seen as an effective way to bring the interests and concerns of diverse groups into focus, thus providing general policy direction for the Commission itself.

The Commission on Preservation and Access

The success of the projected brittle books program rests with the Commission and its staff. The Commission will work on behalf of the libraries and organizations that must, in the end, do the work of preservation. Simultaneously, it must be an effective agent for all who will ultimately provide financial and intellectual support. In a sense, the Commission is seen as the matrix for this preservation activity, providing an ordered place for existing components and seeking to supply the elements required to fill the gaps.

The initial membership of the Commission will include some members from the original Committee and other individuals suggested by Committee members. Additional members may be enlisted by the Commission itself, which is expected to shape its own procedures, practices, and program, building on the conclusions of the founding Committee. For an initial period, the Council on Library Resources will provide a base for Commission operations. Funding for staff and Commission expenses for approximately three years will be required, after which time the Commission will be expected to have established financial and operating independence.

The Commission will be expected to:

1. Develop a funding plan for the preservation of brittle books and, with assistance from the Advisory Council, establish and develop a program to generate funds for use by participating libraries.

2. Establish the general conditions, policies, and procedures governing preservation work for the guidance of libraries, publishers, and other agencies interested in participating in the brittle books program.

3. Promote further development of a preservation information service by the Library of Congress and, especially, encourage the members of the Advisory Council to bring such information to the attention of their own organizations.

4. Encourage technical and other research on topics of importance to the brittle books program. Leadership of and cooperation among the national libraries and the National Archives seems especially critical in this area.

5. Establish a monitoring system to gather and analyze information about all aspects of preservation activity. Results of analytical work will help shape future methods and directions, will keep participants informed, and will be required in the preparation of reports to funding sources.

6. Monitor the performance of bibliographic systems to assure that information required to manage the preservation enterprise and to promote access to products is readily available.

7. Assure that access to preserved materials is efficient and supportive of research and scholarship. It is probable that existing practices and procedures will have to be modified as the quantity of available items increases.

8. Build and maintain effective communication with key organizations through the Advisory Council and promote participation in planning and operations by those institutions and individuals committed to the cause of preservation.

The National Advisory Council on Preservation

The Advisory Council should be affiliated with the Library of Congress. Its initial membership should include individuals designated by those library, archival, academic, and scholarly organizations with an interest in preservation. The Council, which is expected to set its own procedures and practices, may invite participation by additional organizations. The Advisory Council is intended to provide a link between organizations committed to preservation and the Preservation and Access Commission itself. The Council is expected to provide assistance to the Commission, and the Commission will make its work visible to supporting organizations through Council members.

The Advisory Council and its individual members will:

1. Inform members of their constituent organizations about preservation plans and operations.

2. Bring to the attention of the Commission the interests, concerns, and advice of their members.

3. Work in collaboration with the Commission to develop the procedures and activities required to support funding for preservation. The Council should seek to speak with one voice rather than many.

4. With guidance from the Commission, participate in long-range policy review.

5. Promote the objectives of preservation and conservation internationally.

Funding

The projected cost of addressing the brittle books problem over the next twenty years cannot be accommodated in the operating budgets of libraries. If an extraordinary preservation program is to be established and maintained, extraordinary funding will be required. The Preservation and Access Committee was not charged with raising funds for preservation, but it did conclude that raising the amounts required, over an appropriate period of time, was possible. The elements essential to success include:

1. Leadership, expressed by a substantial commitment of funds by key research universities and far-sighted government bodies.
2. Provision of carefully targeted funds by private foundations to assure initial progress in the essential areas—e.g., organizational continuity, installation of prototype programs, public information activities, incentive funding.
3. A public commitment to preservation that will serve to support federal and state funding of the brittle books program in increasing amounts.
4. Eventual participation by research universities and research organizations.
5. Provision for preservation of future acquisitions in the operating budgets of libraries, archives, and other organizations to help assure that the problem we now face will be contained in time.
6. Constructive involvement of the publishing community and library service organizations, especially the segments concerned with scholarly publications and the distribution of text on demand.

Future funding must be built on the base that now exists and that has grown in important ways during recent years. The level of funding needs to grow gradually and in phase with program development, reaching a stable, sustainable, and adequate level (approximately $15 million annually) in perhaps five years.

The measure of success will be in the response to questions such as these:

Will universities be willing to separate the matter of funding a national brittle books program from the process of setting annual library operating budgets?

Will library directors, many of them with pressing budget problems, support institutional participation?

Will private foundations continue and even expand their support of preservation?

Will the federal government and state governments join forces with others to support the brittle books program?

Will the great majority of research institutions take part even though their own libraries might not seem to have a preservation problem? (Given the goal of equitable access to preserved materials, there can be no free ride.)

Will all funding sources encourage libraries and archives to "play by the rules" that will be advanced by the Commission?

The Preservation and Access Committee has not tried to find answers to these questions. Thoughtful discussion has created a sense of optimism that this difficult task can be done—perhaps not perfectly, but responsibly. There is full agreement that now is the time to try.

[Exerpted from pp. 9-15 of "Brittle Books: Reports of the Committee on Preservation and Access." Council on Library Resources, Inc., Washington, D.C., 1986.]

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The Commission on Preservation and Access

Introduction: The Brittle Book

The problem is well known by librarians: Millions of books in libraries throughout the nation are in various stages of disintegration because the acidic paper on which they are printed is turning to dust. If the contents of these "brittle" books cannot be saved in time, Americans will lose an important part of their heritage. And because of the condition and number of the books, the realistic course of action is to preserve their contents — by microfilming or other appropriate means.

To address the brittle books problem, the Council on Library Resources convened in 1984 a study group of library directors, university officers, and scholars to consider possible action on a national scale. In April 1986, the group recommended creation of a **Commission on Preservation and Access** to support, coordinate, and assist in meeting the substantial funding requirements of a national brittle book preservation program.

At the same time, a **National Advisory Council on Preservation** was established to promote participation in such a program by interested academic and professional organizations, and to advise the Commission in its work.

While the Commission on Preservation and Access was created in response to a growing national awareness of the brittle book problem, its proponents also realized that an equally important part of the preservation equation would be the assurance of continued and universal access to preserved materials — so that the result would be both the preservation of important information and wider access to it.

Requirements for a National Program

With the assertion of both preservation and access as goals, the Commission identified these requirements as necessary for a national program to be successful:

- ☐ **Widespread understanding of the preservation problem** will be required to help generate sufficient financial and institutional support.
- ☐ Brittle book preservation should **employ the most effective technology** available at any given time. (Although there are good prospects that other technologies will emerge, microfilming to archival standards is the most widely accepted technology available at present).
- ☐ An **efficient bibliographic system** will be required, given the dispersion of preservation work and the need for accurate and timely tracking of activity.

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- ☐ **Systematic and purposeful collaboration** — among all libraries and allied organizations — will be essential in assuming responsibility for selection of categories of material, and in accomplishing the work of preservation.

Role of the Commission

Given these requirements, the Commission on Preservation and Access will:

- Provide an organizational structure to assist and support the libraries directly involved, and
- Promote a funding plan for the work.

Both of these tasks are aimed at adding cohesion and force to existing efforts and aspirations. Thus, the Commission will work on behalf of those libraries and organizations that must, in the end, do the work of preservation.

At the same time, the Commission must be an effective agent for all who will ultimately provide financial and intellectual support. In a sense the Commission is seen as the matrix for preservation activity, providing an ordered place for existing components and seeking to supply the elements needed to fill the gaps.

The Commission's initial activities are designed to:

- ☐ Develop a funding plan for the preservation of brittle books and, with assistance from the National Advisory Council on Preservation, establish and develop a program to generate funds for use by participating libraries.
- ☐ Establish the general conditions, policies, and procedures governing preservation work for the guidance of libraries, publishers, and other agencies interested in participating in the brittle books program.
- ☐ Promote further development of a preservation information service by the Library of Congress and, especially, encourage Advisory Council members to bring that information to the attention of their own organizations.
- ☐ Encourage technical and other research on topics of importance to the brittle books program.
- ☐ Establish a monitoring system to gather and analyze information about all aspects of preservation activity.
- ☐ Monitor the performance of the essential bibliographic system.

- ☐ Assure that access to preserved materials is efficient and supportive of research and scholarship.
- ☐ Build and maintain effective communications with key organizations through the Advisory Council.

Members of the Commission on Preservation and Access

Billy Frye, Vice President for Research and Dean of the Graduate School of Arts and Sciences, Emory University, *Chairman*

Millicent Abell, University Librarian, Yale University

Herbert Bailey, Director Emeritus, Princeton University Press

James Govan, University Librarian, University of North Carolina at Chapel Hill

Vartan Gregorian, President, New York Public Library

Kenneth Gros Louis, Vice President, Indiana University

Carole Huxley, Deputy Commissioner for Cultural Education, New York State Education Department

Sidney Verba, Director, Harvard University Library

William Welsh, Deputy Librarian of Congress

Sponsors of the Commission's Work

Funding of the initial work of the Commission on Preservation and Access is being provided by:

The Council on Library Resources
The H.W. Wilson Foundation
University of California, Berkeley
Columbia University
Harvard University
University of Illinois
University of Indiana
University of Michigan
Princeton University
Stanford University
Yale University
The research libraries of the New York State preservation program

The National Advisory Council on Preservation

Working alongside the Commission on Preservation and Access is an advisory body, the National Advisory Council on Preservation. The Advisory Council seeks to promote participation in preservation goals and to encourage the support of the wide variety of academic, governmental, and professional organizations represented in its membership (see below). The Advisory Council is also seen as an effective way to bring the interests and concerns of diverse groups into focus, thus providing general policy direction for the Commission itself. The Advisory Council includes representatives from the following organizations:

American Association for the Advancement of Science
American Council of Learned Societies
American Library Association
American Theological Libraries Association
Association of American Universities
Association of Research Libraries
Center for Research Libraries
Chief Officers of State Library Agencies
Library of Congress
National Agricultural Library
National Archives and Records Administration
National Association of State Universities and Land Grant Colleges
National Endowment for the Humanities
National Library of Medicine
Research Libraries Advisory Committee of the Online Computer Library Center
Research Libraries Group
Social Science Research Council
Society of American Archivists

For more information about the Commission on Preservation and Access or the National Advisory Council on Preservation, please write in care of the Council on Library Resources, 1785 Massachusetts Avenue, N.W., Washington, D.C. 20036.

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Mr. WILLIAMS. Thank you.

Mr. Weber.

Mr. WEBER. Thank you, Mr. Chairman.

I am here to represent the American Library Association and the Association of Research Libraries. And while I submit to you my written testimony, I think I will excerpt it in order to save some time.

We are indeed faced with the requirement of improving the situation with the deteriorating materials—brittle books—else we will, in fact have lost a good deal of who and what we are.

Let me put it in a local context, a personal one. I was born in Waterville, Maine, a town of some 16,000 people. My parents wrote a great deal, they published—and it was difficult to find the materials needed. Currently, I live in California on unincorporated county land. The nearest city is Palo Alto, with some 60,000 people. That city has a public library system—a fine one—with 230,000 volumes. The nearby Stanford University Libraries and the Hoover Institution, together, have about 5½ million, of which about a quarter of the books are in brittled condition by our own shelf determination.

In addition to that, there are archival manuscript materials of phenomenal degree. The Hoover Institution itself must have more archival records of social action than many entire States.

So we are in fact faced with a very serious problem. How, then, do we have access to these materials if, in fact, they are not available for loan? Because when materials are in a brittle state, and if I am working in, whether it be Spokane, Washington or some other city, I write to the other library and the material is not available, if that library holds one that is in brittled condition, and if there has not been a microfilm made of that original.

Similarly, if there is archival material, letters or documents, then by local policy, those items do not circulate from libraries outside the building. And if no film copy exists, again, I am unable to do the work that I would wish to do.

So it is in fact very limiting to those of us who live outside of the eastern seaboard in the hinterlands. In fact, the hinterlands are most of the United States. This is where most of the librarians, or members of the American Library Association, do their work. This is where most of the Association of Research Libraries exist—in one State after another.

You may well ask: What do these libraries contribute in terms of paying for their own costs of trying to solve this situation locally? In fact, we do have some data. College and a few university libraries have found that they could commit one to three percent of their operating moneys to this preservation effort.

A substantial number of ARL libraries have made major efforts to increase this and are not committing some three to five percent of their budget. A few libraries, all too few, have been able to budget as much as six to eight percent of their total expenditures for preservation activities.

This very significant effort libraries have made to address this problem is clear when a comparison is made with the amounts they have spent on preservation activities and the amounts spent on acquisition of new materials for the collection.

From 10 to 25 percent of their entire materials budget to acquire and preserve materials—from 10 to 25 percent is spent for binding, microfilming, or other preservation treatment.

This can, then, be regarded as a measure of the problem—the urgency with which the need is viewed by the administrations of these libraries.

It seems apparent that given the size of the problem that we have to be selective, and my colleagues have mentioned some of the methods being used. We at Stanford University rely very heavily on the bibliographers and curators, who are subject specialists, to choose the materials that are most embrittled and which must be dealt with first of all.

The need, then, to preserve representative rather than exhaustive collections for all subject areas requires that scholars and librarians—such as I have mentioned—do plan within a national context and use limited resources in a coordinated fashion. Thus, a national collection, in effect—a national collection—will exist, composed of the individual collections of discrete subjects at different institutions that are formed with minimal duplication and with future access assured by everyone. This is the result of a major preservation microfilming program that must be greatly enlarged from its present scale.

The final points I would mention is that since we know the magnitude of the problem, since we have a methodology for selecting how and where to begin our attack, it is apparent that a solution to the problem is at hand if we act together.

So in conclusion, let me add to its solution by providing the answers to three other key questions that I believe you have raised for us.

One: What are the appropriate Federal, State and private sector roles in efforts to address this problem?

To answer that, each sector plays a key role—as I have suggested and as my testimony elaborates on—essential cooperative planning is provided by such organizations as the ALA, the ARL, the Research Libraries Group, and the Council on Library Resources.

The new Commission Preservation and Access can play a lead role. The Library of Congress has for years done us all a great service with its research and development work and its publicizing and proselytizing of the state of the preservation art—including international coordination work.

The National Agricultural Library and the National Library of Medicine have also initiated preservation programs, as you indicated.

The Government Printing Office should be encouraged to work with librarians, archivists and paper companies to establish and apply standards for acid-free paper and binding as appropriate for a good part of government publications.

The Higher Education Act Title II-C program—of extreme importance—and the National Historical Publications and Records Commission program are now modestly funded but they do make significant contributions to the national preservation strategies.

The program of the Office of Preservation in the National Endowment for the Humanities is marvelous, and should be greatly strengthened.

The second question was: What procedures are necessary to ensure public access to preserved materials?

Part of the answer is easy, since public academic and independent research libraries have a longstanding commitment to access. In addition, it requires that individual institutions, professional associations and funding agencies insist that bibliographic data be currently maintained on what is in the queue for filming, what has been completed and by whom.

It requires that reading copies of the master films be readily available and publicized, and that the interlibrary services staff and users consider films as routine rather than exceptional loans. Here is a role indeed for ALA, ARL and consortia such as the Research Libraries Group.

The third and final question: And what are the costs and who should bear them?

As you heard from Jim Haas, there have been fair estimates of the total cost, and it is indeed a daunting figure. While each group might like some other to pay full costs, this is patently unrealistic. A consensus exists among libraries that costs must be shared; some costs must be covered locally. Start-up costs in particular need governmental and foundation help. Ongoing costs require local budgeting for at least a significant share, with endowment support for preservation programs in research libraries to the extent possible.

Yet, one must realize that libraries generally are so meagerly financed that there is little budgetary potential for dealing with problems of 10 to 50 years hence when current book budgets and clientele services are now severely beleaguered. The brittle books problem is a national concern, indeed, worldwide. Recognizing that, Federal support for a few decades is essential. A major share of start-up costs should be a Federal responsibility, as should a strong portion of local operating costs.

Just as the Federal highway system is financed as being in the Nation's interest, for both civilian and national defense purposes, exactly so should the brittle books system be financed as in the Nation's interest. Students, scholars, our defense structure, our very civilization demands no less protection against the now recognized seeds of cultural destruction.

Thus, it seems evident that there must be a Federal role, sharing the effort with State, local and institutional authorities.

To improve access to cultural resources and safeguard our own future, the Congress must act, providing leadership and help with financial aid. On behalf of the Association of Research Libraries and the American Library Association, I request your support.

Thank you.

[The prepared statement of David C. Weber follows:]

Statement submitted by the Association of Research Libraries
and the American Library Association

On the Problem of
"Brittle Books" in our Nation's Libraries

Presented By

David C. Weber
Director, University Libraries
Stanford University

Before the Subcommittee on
Postsecondary Education
Committee on Education and Labor
U.S. House of Representatives

March 3, 1987

I am David C. Weber, Director of the Stanford University Libraries, member of the Association of Research Libraries and Chair of its Committee on Preservation of Research Library Materials, also a member of the American Library Association and Past-President of its Association of College and Research Libraries.

While you have heard of the frightful rate at which valuable cultural records are becoming embrittled, this "brittle books" challenge must be faced and corrections made over the next two to three decades or we all shall have lost a good deal of who and what we are.

To put it in a local context, I shall describe the situation in my home town, Palo Alto, California--a city of some 60,000 people including many scientists, engineers, teachers, government officials, students and writers.

An individual interested in a current political issue and concerned with its antecedents, causes, and past corrective attempts has available the following:

- A fine public library with over 230,000 volumes.
- The nearby Stanford University Libraries and the Hoover Institution, together having 5.5 million volumes, also nearly 3 million

microtext sheets and large numbers of maps, motion picture films,photographs, prints, slides, sound recordings and data sets.

- And within 20 miles there are a state university library, two private college libraries, four community college libraries and a dozen other public libraries linked by a State Library inter-system service.

A richness for that individual pursuing a political issue? Yes and no.

The resources for study are, at 6 million volumes and upwards of 60 million manuscripts, far greater than in most communities for 60,000 people. The Hoover Institution alone has more archival records of social action than many entire states. However, over a quarter of these resources are now so fragile that use is perilous, and in little more than a decade any use will be problematic due to the rapid decay of paper. Most of those resources are housed in quarters where temperatures bake the materials several months of the year, a situation gradually being corrected at Stanford and elsewhere.

Resources in the West amount to only a fraction of what they are in the East and North East, even the Midwest. The hinterlands are in fact most of these United States. Requests for interlibrary loan increasingly result in no availability because the owning library indicates its book is too fragile to

loan, and a microfilm does not exist, or by policy original letters and archival documents do not circulate outside the building, and again no film copy exists.

How frustrating for the individual researcher! How limiting if one does not live in Washington, New York, Philadelphia or Boston! How frightening to realize that the condition is nationwide, of awesome proportions, and getting worse every year!

Concerning interlibrary loan of microfilms, there is a significant traffic of this type, though it is much less than of books or photocopies provided in lieu of the volume. An institution like Stanford University lends to all kinds of libraries - public and school libraries, county and state libraries, agencies of government, commercial and not-for-profit research organizations, as well as community colleges, four year colleges and universities. In a recent year, Stanford has lent microfilms to institutions as far away as the State University of New York at Buffalo, Columbia, Florida, Johns Hopkins, Princeton, Rutgers, Virginia and Yale. Libraries are experienced in lending this type of material. All academic and most public libraries have reading machines available for 35mm film. Pre-filming activities, including collation and creation of film captions (targets), and technical specifications for filming, including quality control procedures, have been well established by national and international professional and standards

organizations, with major contributions over the past 40 years by the Library of Congress.

The production of preservation microfilms is, in fact, one of long standing. Starting in the early 1930s there have been programs in some university libraries, and other research libraries such as the New York Public Library, to make archival master film copies of brittle material, copies from which public reading copies are made, thereby archivally assuring availability of the original text for future generations.

This preservation filming, sometimes the by-product of an interlibrary loan request, is in the interest of the nation as a whole. It is true that the institution making the negative film is protecting its own investment in the original. But it is every bit as important to readers, students and scholars elsewhere throughout the country that the content be archivally preserved. Otherwise it may be lost, permanently.

Let me use one example. In the early 1950s at the Harvard University Library, I was responsible for a foreign newspaper microfilm project that had been originated in 1938 with Rockefeller Foundation funds. One of the challenges that was undertaken was to prepare a complete master microfilm of every issue of Pravda and Izvestia. The first of these Russian newspapers began publishing March 18, 1917 and the second on February 28, 1917. The task was to complete the file for the

first 20 years. This required obtaining negative film from copies of individual issues held at Columbia, the New York Public Library, the Hoover Institution, Harvard, the British Museum Library, the Bibliotheque Nationale, the Bibliotheque de Documentation Internationale Contemporaine in Paris, and a few issues found only in Moscow itself. Even so, the master archival film still lacked 24 issues from 1917, 9 in 1918, 1 in 1919, 4 in 1920 and 1 in 1921.

One can reflect, however, on how important was that preservation effort, as just one example of this ubiquitous "brittle books" problem. Copies of that film have now been sold to many libraries here and abroad. It is the only nearly complete record of these primary sources, regardless of where in the world an individual may be working.

Brittle books reside in libraries of all sizes and types. How any one library addresses the brittle book problem depends on a number of factors including but not limited to the number of brittle books to be treated, the filming and processing equipment, trained staff, and financial support available to the library. There is general agreement within the library community that it is unrealistic for every library to develop in-house facilities capable of producing archival-quality microfilming of brittle books. Reformatting is an expensive undertaking and in-house facilities are difficult to justify unless a library

anticipates a significant volume and steady flow of brittle books to be treated. While there are a few exceptions, only the larger libraries have developed in-house programs to treat brittle books. Such operations serve their own institutional needs as well as serving the needs of other libraries as a source of microfilm to replace brittle books. Libraries without in-house preservation facilities, with just as serious a problem but with fewer numbers of brittle books, face an extra hurdle of identifying a laboratory or service agency where their unique materials may be treated.

Smaller libraries facing this special problem might take a number of different approaches. In some cases, a nearby library that has developed an in-house facility might provide preservation services for other libraries. A few commercial firms can handle archival microfilming. In addition, regional non-profit preservation laboratories have been established as cooperative and "mutual help" projects. One regional center is the Northeast Document Conservation Center (NEDCC) in Andover, Massachusetts; developed with funds from the Council on Library Resources, the National Endowment for the Humanities, and private sources, the Center has evolved into a full-service treatment facility for preservation of research materials. Another center is the Mid-Atlantic Preservation Service, based at Lehigh

University. Each of these options has its limitations.

Some commercial facilities that have traditionally provided filming services mainly for business records have developed or are developing new services to film brittle books for libraries to exacting archival standards. In this regard, considerable effort has been made from California to Virginia by individual librarians and library associations to educate people operating such commercial facilities about the special requirements for the filming of brittle books, as well as educating librarians as potential customers of such services to the information filmers need from them.

By way of example, I would like to note that the Association of Research Libraries, in partnership with NEDCC and with funding from the Andrew W. Mellon Foundation and the National Historical Publications and Records Commission, has developed a comprehensive instructional manual to assist in preservation microfilming. We expect publication of the manual by the American Library Association this year.

The majority of libraries will seek services outside their own organization to treat their brittle books. They will require many of the same things as libraries with an in-house program:

- Staff trained to assess the extent of the "brittle book problem" in a library collection,

to develop a strategy for addressing the problem, and to coordinate the work.

- An internal process to identify, insure completeness of and prioritize the material needing treatment, within the context of a national strategy.
- Management support, e.g. operational models, guidelines, instructions, manuals, public information programs and staff workshops for continuing education.
- Bibliographic information within a national network to determine whether the brittle materials in library collections are unique, whether the item has already been reformatted and the microfilm available, or whether the item has been selected for filming but not yet treated elsewhere. (As noted elsewhere in my statement, the availability of such bibliographic information is absolutely essential for using our limited resources most effectively.)
- Funding to support staff to identify brittle materials that require reformatting and to pay for archival preservation filming, entering of the revised bibliographic data into a national database, and storage locally or elsewhere of the archival master film under archival conditions.

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Libraries without in-house preservation facilities have one urgent need however: more regional and cooperative centers. The number is slowly growing but most of the country is still unserved in this regard. Encouragement as well as financial support is necessary.

A survey of scholars by the National Humanities Alliance revealed that their high priority in the area of humanities scholarship was the preservation of research library material. Members of the American Library Association and the Association of Research Libraries have been aware of this crucial need. It was therefore most welcome news in 1985 when the National Endowment for the Humanities expanded its response to this national need by establishing the Office of Preservation. I could hardly exaggerate how important this NEH Preservation Program will be to libraries, though the funding has yet been much too small. Grants available from the Department of Education under the Higher Education Act, Title IIC constitute another source of funding of extreme importance to a national preservation effort. Fortunately foundations such as the Andrew W. Mellon Foundation have also provided significant support. The State of New York has budgeted an exemplary statewide preservation program. And individual libraries have also built into their basic operating budgets a substantial commitment of financial resources.

As examples, some college and a few university libraries

have found that they could commit 1% to 3% of their operating monies to their preservation effort. A substantial number of ARL libraries have made major efforts to increase this and are now committing 3% to 5% of their budget. A few libraries, all too few, have been able to budget as much as 6% to 8% of their total expenditures for preservation activities. The very significant effort libraries have made to address this problem is clear when a comparison is made between the amounts they have spent on preservation activities and the amounts spent on acquisition of new materials for the collection. From 10% to 25% of their entire materials budget is spent for binding, microfilming or other preservation treatment. This can be regarded as a measure of the problem, the urgency with which the need is viewed by the administrations of these libraries.

One might ask how priorities can be set when libraries are able to spend limited sums on the preservation of materials and yet the problem is of awesome dimension. Let me cite a hypothetical example, based on a program designed for the Association of Research Libraries. ARL has used a documentary conspectus to provide a descriptive map of the strength of existing collections and current collecting efforts in specific subject fields. That data could provide the basis for selecting which members of ARL could best be asked to undertake preservation responsibility in this or that subject. Since library collections are not duplicates, two or even three libraries may need to pool their resources for adequate coverage

of one subject. That sum of archival microfilm will then function as the representative collection of record for that subject field.

The Research Libraries Group of institutions has followed the same strategy. (RLG is a Connecticut corporation formed and supported by about three dozen research universities and libraries, with services used by many libraries scattered from Maryland and Florida to Colorado and California.) One of its long-standing programs is dedicated to the preservation of research library materials. Its members, nearly all of whom are also members of the American Library Association and the Association of Research Libraries, have for four years been pursuing a focused and carefully worked out program of preservation microfilming. A conspectus of comparative collection strengths has been assembled. Libraries with special strength in a discrete subject field have undertaken filming of those items, concentrating first on U.S. imprints between 1850 and 1920. A computer database records decisions to film and lists resultant master films. Masters are stored archivally by a Pennsylvanian commercial firm. A broader cooperative attack on a similar prioritization basis, extended to foreign imprints and more recent publications, is now being fashioned by RLG. For an example, Chinese language materials of 1880-1949 are now being filmed.

While national standards would be used for a national

program of preservation filming, the processes and priorities used to identify items for preservation would be left to the discretion of subject experts in the individual institution. In the interest of cost-effectiveness, all variants of a popular history or text would not be filmed, though all variant editions of a literary work would be. Also excluded would be, e.g., offprints and facsimiles. Within the subject designation assigned to a particular library, funds would be used to concentrate on the materials identified as being in the most brittle or physically deteriorated state. Once preservation copies have been made of those that are most endangered, one would then turn to those that will be in a similar state in another five or ten years, and so on in a progressive conversion effort.

The need to preserve representative rather than exhaustive collections for all subject areas requires that scholars and librarians plan within a national context and use limited resources in a coordinated fashion. Thus a "national collection" consisting of individual collections of discrete subjects at different institutions will be formed with minimal duplication and with future access assured for everyone. Later there may be the chance to supplement that national collection where other libraries can fill in significant gaps. But only in this systematic way can we guarantee that a balanced national collection of materials in all subject fields will be available in the next century.

I do not mean to suggest that all of the procedures and methods have been agreed to; quite the contrary. Yet the objective is universally supported. The standards are well understood. The dependability of preservation microfilming is well established. The longtime value of this investment is assured by storage of the master negative in secure vault-like quarters with suitable atmospheric conditions.

As the ARL testified in March 1986 before the House Subcommittee on Appropriations for the Interior Department and Related Agencies (including funding for the National Endowment for the Humanities), libraries also recognize an absolute requirement for a national bibliographic record, or catalog, which records when the preservation copy has been made, where it exists, and thereby publicly records where use copies may be purchased or borrowed. "Given the enormous amount of material to be preserved, the urgency to move ahead as quickly as possible, and the limited funding available, duplication must be avoided. Technology provides a reasonable solution: register local decisions to preserve a book, newspaper or any research material in a widely available database to alert others that the title need not be treated elsewhere and that the title is, or will be, available for use. Reasonable access to information about what titles have already been preserved or identified for treatment is a basic element of the infrastructure necessary to move this national objective ahead in a cooperative and expeditious manner. In short, we require a basic bibliographic structure in place to make wise preservation decisions."

Since that hearing, I am very pleased to report that the Mellon Foundation and NEH have awarded the Association of Research Libraries $1,200,000 in funds to convert all monographic records in the National Register of Microform Masters (located in the Library of Congress) into a machine readable database, one that will be available two years from now in the RLG database, the OCLC database, the Western Library Network database and others. This project will be a grand achievement, providing a basic building block for the national bibliographic network necessary for economical preservation of brittle books.

Since we know the magnitude of the problem and since we have a methodology for selecting how and where to begin our attack, it is apparent that a solution to the problem is at hand if we act together. Let me add to its solution by providing the answers to three other key questions.

1.What are the appropriate Federal, State and private sector roles in efforts to address this problem? Each sector plays a key role, as I have suggested in the picture described above. Essential cooperative planning is provided by such organizations as ALA, ARL, RLG and the Council on Library Resources. The new [redacted] Commission on Preservation and Access can play a lead role. The Library of Congress has for years done us all a great service with its research and development work and its publicizing and proselytizing of the state of the preservation art--including international coordination work. The National

Agricultural Library and the National Library of Medicine have also initiated preservation programs of value nationally and internationally. The Government Printing Office should be encouraged to work with librarians, archivists and paper companies to establish and apply standards for acid-free paper and binding as appropriate for a good part of government publications. The Higher Education Act Title II-C program and the National Historical Publications and Records Commission program are modestly funded but make significant contributions to the national preservaiton strategies. The program of the Office of Preservation in the National Endowment for the Humanities should be greatly strengthened.

2.What procedures are necessary to ensure public access to preserved materials? Part of the answer is easy, since public, academic and independent research libraries have a long-standing commitment to access. In addition, it requires that individual institutions, professional associations and funding agencies insist that bibliographic data be currently maintained on what is in the queue for filming, what has been completed and by whom. It requires that reading copies of the master films be readily available and publicized, and that the interlibrary services staff and users consider films as routine rather than exceptional loans. There is a role here for ALA, ARL and consortia such as RLG.

3.And what are the costs and who should bear them? The Council

of Library Resources has made fair estimates of the total cost. The total effort we face is daunting, perhaps on the order of tens of millions of dollars. While each group might like some other to pay full costs, that is patently unrealistic. A consensus exists among libraries that costs must be shared; some costs must be covered locally. Start up costs in particular need government and foundation help. Ongoing costs require local budgeting for at least a significant share, with endowment support for preservation programs in research libraries to the extent possible.

Yet one must recognize that libraries generally are so meagerly financed that there is little budgetary potential for dealing with problems of ten or fifty years hence when current book budgets and clientele services are severely beleaguered. The brittle books problem is a national concern, and indeed worldwide. Recognizing that, Federal support for a few decades is essential. A major share of start up costs should be a Federal responsibility, as should a strong portion of local operating costs.

Just as the Federal highway system is financed as being in the nation's interest, for both civilian and national defense purposes, exactly so should the "brittle books" system be financed as in the nation's interest. Students, scholars, our defense structure, our very civilization demands no less protection against the now recognized seeds of cultural destruction.

Thus it seems evident that THERE MUST BE A FEDERAL ROLE, sharing the effort with state, local and institutional authorities.

Resolutions supporting a second White House Conference on Library and Information Services for 1989 have been introduced in the House and the Senate (H.J. Res. 90 and S.J. Res. 26). I call attention to this proposal on this occasion because we anticipate such a forum could provide an opportunity to focus national attention on the catastrophic consequences of the deterioration of printed material in the nation's libraries. As this hearing demonstrates, Congress is aware of the problem and is actively engaged in defining an appropriate federal role to contribute toward a solution. But we all acknowledge that Congress cannot solve the problem alone - nor can any other single agent. The enormity of the problem and the costs associated with developing and implementing programs to preserve brittle books dictate a responsibility within every sector of the nation. Therefore, while the proposed White House Conference on Library and Information Services will not 'solve' the brittle book problem we consider here today, it would provide a forum to continue to raise the level of understanding about the scope and seriousness of the challenge we all face. We appreciate the support members of the Subcommittee showed in the past for the Conference and hope we may count on that support continuing again this year.

To sum up: We recognize the urgency and magnitude of the

library materials preservation problem. We have a plan whereby decisions can be made as to what material needs preservation and in what priority. We have a rough idea of the costs involved. We accept the concept of reasonable cost sharing. And we are rather well equipped - except for the lack of a federal policy of commitment to help resolve the problem of brittle library materials, and except for sufficient funding.

To improve access to cultural resources and safeguard our own future, the Congress must act, providing leadership and help with financial aid. On behalf of the Association of Research Libraries and the American Library Association, I request your support.

Mr. WILLIAMS. Thank you very much.

Mr. Sparks, do you have testimony as well?

Mr. SPARKS. Mr. Chairman and members of the subcommittee, I have some brief remarks to update you on what the Library of Congress has been doing over the last two decades to meet our preservation challenges.

Dr. Boorstin and Dr. Gregorian have handled the problem of brittle books and have ably covered the difficult task facing us in the very near future if we are to salvage the intellectual contents of these millions of volumes.

When the Library created the Preservation Office in the fall of 1967, it realized that a constant commitment to scientific research was essential to develop lasting solutions to the preservation problems. To this end, a Preservation Research and Testing Office was established.

Over the last two decades, significant and original contributions to library and archive preservation have been made. Examples of this include approaches to the deacidification and stabilization of paper, the development of the use of polyester film in encapsulation as a physical protection for fragile paper, and other contributions which have had a major impact on preservation practices in libraries and archives throughout the world.

Our Conservation Office has issued a number of practical publications to assist libraries in preservation and conservation work. The National Preservation Program Office, established in 1985, encourages regional and national preservation efforts, issues a quarterly newsletter giving information about activities at LC and efforts of other institutions to cope with their preservation programs, and provides worldwide information on preservation practices.

The most highly publicized—and the most promising—solution to prevent books and other paper-based materials in the Library's collections from moving into the brittle state is the development of a gaseous process for the mass deacidification of books. This method was developed in our Research and Testing Office and was patented by the Library to arrest paper degradation and increase the life of library materials by a factor of three to five times.

Based on gas phase permeation and reaction with diethyl zinc, the process neutralizes the paper's acidity and leaves a residue of zinc oxide that protects paper for many centuries from further acid-induced loss of strength.

Two large-scale tests in 1978 and 1982 served to establish the large-scale feasibility of the process and 13 small-scale tests proved the process was capable of producing a well deacidified book.

In 1984, Congress authorized the Librarian of Congress, under the supervision of the Army Corps of Engineers, to proceed with the design and the construction of the Library of Congress Mass Book Deacidification Facility at Fort Detrick in Frederick, Maryland. $11.5 million was appropriated for a facility capable of treating up to one million volumes per year from the Library's general and law collections.

A pilot facility had been constructed to Goddard Space Flight Center for engineering scale-up studies. Two incidents at this pilot facility in December of 1985 and February of 1986 caused the Li-

brary of Congress to redirect its engineer efforts for the pilot facility to the chemical process industry.

In this past year we have strengthened project management and contracted with Texas Alkyls, Incorporated, and S & B Engineering in Houston, Texas to redesign and construct a new pilot facility in Houston. We estimate that the Fort Detrick facility will be operational in 1990.

The really good news is that the 1984 survey indicated that 75 percent of our existing general and law book collections can greatly benefit from deacidification—in addition, all incoming books can greatly benefit from deacidification—before going on our shelves.

Successful implementation of our facility could lead to licensing arrangements to the private sector for other facilities of a smaller scale to be constructed on a regional basis.

Beginning the decade of the 1990s we expect, for the first time, to have a program in place that will effectively deal with the destructive force of acid in books. If in conjunction with that program we have a large-scale national cooperative microfilming effort focused on those books beyond the reach of deacidification, we will in fact have a comprehensive national program.

Thank you.

[The prepared statement of Peter C. Sparks follows:]

Statement of Peter G. Sparks
Director, Preservation Office
Subcommittee on Postsecondary Education
Committee on Education and Labor
U.S. House of Representatives
March 3, 1987

Mr. Chairman and Members of the Subcommittee:

I have brief remarks to update you on what the Library of Congress has been doing over the last two decades to meet our preservation challenges. Dr. Boorstin and Dr. Gregorian have handled the problem of brittle books and have ably covered the difficult task facing us in the very near future if we are to salvage the intellectual contents of those millions of volumes.

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Mr. WILLIAMS. Thank you very much.

Mr. Owens, any questions?

Mr. OWENS. Yes.

First, Mr. Haas, do you have any idea, any figures, which show how many libraries across the country have microfilm readers? It's a question I think that most congressmen will be interested in.

How does our constituency get access to microfilm material since that is the only way—once books brittle, that is the only way to deal with them, I understand. Deacidification is something else.

Does anybody have any idea of how many microfilm readers there are out there?

Mr. HAAS. The answer is no. There are some 3,000 academic libraries of all kinds in the country, more than 9,000 public libraries, not counting their branches. I would guess that in all but—in terms of numbers and people, sir, I would guess 75 or 80 percent of that set of libraries has the reading equipment. It is only modest in cost.

I don't want to confuse the issue but I will slightly. Preservation is accomplished—the kind of preservation we are talking about is accomplished through microfilming. But once you have something on film, new technology suggests that there may be additional ways in which to use the item. For example, some years ago there was a machine where one could run microfilm in and get out the paper—the copy flow machine.

It is not unlikely, I think, that the wealth of film that we are building up as a national archive can be used to convert to digital form for reading on a computer terminal, for using it as a base for printing a new edition in small numbers.

Mr. OWENS. But my concern is, currently the number of microfilm readers out there is far too few when you consider that there are 9,000 public library systems. The book and public library system has about 60 branches and most of them don't have microfilm readers.

I go to the main library on Sunday—if you are not in the first 10-minute wave that goes in, you don't get a microfilm reader, although they have a number of microfilm readers there at the main library. So there is a key problem. I just wanted to establish that fact. I do that in order to emphasize that the great hope in preservation, really, I think is in deacidification of some process that really continues to preserve the physical book for large numbers of people.

And on that question, Mr. Sparks or Dr. Boorstin, I have a chronology here which says, as Mr. Sparks noted, in 1979 you began testing the DEZ treatment in large-scale trials. In 1983—at that time you predicted that collections, the treatment of the Library of Congress collection would begin in 1982—but in 1983 you were testing, and still continuing, and your prediction was that you would begin in 1985.

Then in 1986, after a flash fire and an explosion, NASA blows up the LOC, a $11 million dollar treatment facility, and declares its design was fatally flawed. You decided at that time to contract with a chemical company to establish a new facility. And now you are predicting that full treatment will start in 1989.

Another chronology for Canada and their deacidification project, is that in 1974 they began testing. In 1978, they opened a pilot testing plant. In 1981, they became fully operational. They deacidified about 40,000 books a year.

Now, what is the difference in the processes? The basic process, is there a difference? And if the Canadian process works and ours doesn't, why have we not before not adopted the Canadian process?

Congress made quite a commitment, I think, and it is to be congratulated, just as the Library of Congress is to be congratulated for making the proposal and for taking this initiative. But we have an $11 million project here which has not worked to date. And before the accountants catch up with this, I think the profession should get ahead of this and let's have some concrete direct action as immediately as possible.

I understand there is controversy. I mentioned the editorial that appeared in the Library Journal a few minutes ago and I will come back to that in a minute.

But what is going to happen now that is different from what has been happening up to now?

Why isn't that basic process used by Canada worthy of adoption in our process?

Mr. BOORSTIN. Major Owens, I would like to ask Mr. Sparks to respond to that.

But I would just mention that the $11½ million has not been spent, Major Owens. You are aware of that, of course.

Mr. OWENS. No, I am not. Maybe you can bring us up to date on how much has been spent.

Mr. BOORSTIN. We have waited cautiously until we have been assured that the process engineering design will work before we built the plant. So that money is not spent. What money has been spent on experiments, using test facilities, that you mentioned, Major Owens. But with respect to the details, I would like to ask Mr. Sparks to speak.

Mr. SPARKS. Mr. Owens, let me address the chronology for a minute.

The pilot facility at NASA was built after we did a variety of small-scale tests to determine that the chemistry of the process worked very well. The pilot facility concept was part of the engineering required prior to designing the big facility at Fort Detrick. We are building a chemical plant. The normal approach to building a chemical plant is to be build a pilot facility to test the design.

Mr. OWENS. I have limited time.

Mr. SPARKS. Yes, sir.

Mr. OWENS. Can you tell me why you are not using the Canadian—how is the Canadian process appear to be? The U.S. processed at least once. Why have you not adopted that?

Mr. SPARKS. The two processes are very different. We are committed to the idea of using a gas phase process and not a liquid phase process. The Canadian process is a liquid process.

Mr. OWENS. Because that is cheaper or——

Mr. SPARKS. We feel that a gaseous process using diethylzinc as the gas is technically better and that it will lend itself to the large size and the great diversity of our collections. For example, we

hope to deacidify when we are at full capacity, 30,000 books a week.

The Canadian facility, which is a small facility, deacidifies 150 books a day. We want much greater production capacity. There are certain technical difficulties with liquid phase deacidification. We do not want to adopt the liquid Phase treatment for our collections. Our scientists believe that the best approach for large-scale deacidification of a very varied collection—the Library has many, paper formats that we want to deacidify—can best be met by using a gas phase technology. So we have pursued that approach for over a decade.

I think from my own perspective, we do need to give the Canadians credit—as you have done—to have taken this liquid phase technology and done a certain amount of deacidification. However, if you went up there and saw that operation and then look at the size of the operation that we are trying to implement at the Library of Congress, it would be intuitively obvious that it would be very difficult for us to use a liquid phase technology effectively.

Mr. OWENS. So you have studied the process and decided that it just is not suitable.

My problem is that over a 10-year period we should have more to show for our effort, it seems to me. And since the benefits of deacidification are monumental, and I would like to hear something that says that we can expect some results—and you don't have to wait for another 10 years.

Mr. SPARKS. I would hope so, too.

I would point out that we did not begin large-scale testing until the beginning of the 1980s, and it took another two years after those first two large-scale tests which indicated this process could work on a large scale, to iron out the technical aspects of the process, so that we knew we had something that was good. We had never anticipated being fully operational until late 1987—we now are saying 1990.

Mr. OWENS. Why did you give the contract to NASA? Did they claim expertise in this area?

Mr. SPARKS. At that time, we were looking for availability of large vacuum chambers that we had to do the test in. They had a lot of vacuum chambers and engineers that wanted to take on the project.

In their defense, I think we had a very successful testing program there. Where we ran into difficulty is when we started to design a production chemical facility. On that point, we had to move from NASA to the chemical process industry. We have done this and the new design is in place. The contractor is going to construct a new pilot facility starting in June. The design looks very good.

Mr. OWENS. Mr. Boorstin.

Mr. BOORSTIN. May I ask for a word from the Deputy Librarian who has been very close to this problem and the international aspects of it.

Mr. WELSH. Mr. Owens, I will be very quick.

As Dr. Sparks said, we began in the laboratory. We used a pressure cooker—four books and a pressure cooker—to first test the

process. Then we went to the GE facility at Valley Forge. Every time we moved ahead it was try to get to a scaled up the operation.

Then we went to NASA because they had the 8½ foot 15 foot vacuum chamber, which they can make available to us. It was a vacuum chamber that was in use in the space program. They agreed to make it available to us.

After we did that, we did a test run of 5,000 books where we had taken the acid out of the books, extended the life of those books four to five hundred years.

Our test facility in Houston, Texas will be up and running according to schedule in September of this year. Give us a few more months and we will demonstrate the process engineering.

We are talking about a monumental program. Even with this capacity that Dr. Sparks talks about, it will take us 20 years to deacidify all of the books currently in the Library's collection.

Mr. OWENS. I want to take this point to offer for the record the editorial that did appear in the Library Journal and the article that is also contained in that issue to let you know that there are dissenting voices as to what we have heard here in terms of going ahead with that same——

Mr. WELSH. Mr. Owens, would you please include my response?

Mr. OWENS. Do what?

Mr. WELSH. Would you please include my responses also in the record?

Mr. OWENS. Oh, yes, your response will be on the record.

Mr. WELSH. Thank you, sir.

Mr. OWENS. Your written response? Yes, if you will submit it for the committee.

I will ask also, Mr. Chairman, that the response be included for the record because I think within the library community it will be good to try to work out these solutions and not have them escalate into the larger community which will be wondering why $11 million has not been spent if it has been made available.

We also would like to see some effort, extraordinary effort, made to hasten the day when the benefits of deacidification can be made available in the process of preserving books. So I would like to at least have the record show that.

Mr. WELSH. Mr. Owens, would you permit me to add further comment?

Mr. OWENS. Yes.

Mr. WELSH. There is no single solution to the problem that we face in libraries. We use microfilming, and this is what we are talking about here, because there's a certain number of volumes that can only be saved through microfilming. There's optical disk technology that the Library of Congress is a pioneer in. There's cold storage also.

Mr. OWENS. Yes, I am aware of that. I hope that as a result of this hearing and the committee will come up with legislation that will deal with all aspects of it, including, Mr. Chairman, I hope we find some way to have some kind of help to get more microfilm readers purchasers because that is a short-term reader benefit that is needed out there, plus all the other kinds of things that have been proposed.

But on this matter, I have never seen the Library Journal, as one of the leading professional journals, take such a strident tone in its criticism. I think that shows that within the profession there is a problem in terms of reaching the best solution to this very difficult problem, which, if solved, will give us such great benefits. So I hope that we can move forward in that spirit.

Mr. WILLIAMS. Without objection, the gentleman's request for the inclusion of the editorial will be accepted into the record as, of course, Mr. Welsh's statement.

[The Library Journal article and editorial material follow:]

EDITORIAL

It's Time To Dump DEZ

Congress has already appropriated $11.5 million to build a plant for the mass deacidification of books at Fort Detrick in Maryland, using the diethyl zinc (DEZ) process developed by the Library of Congress (LC). LC long ago made its choice of a process for book deacidification and has spent years developing and publicizing the DEZ process.

The library community and the Congress have had to rely primarily on statements and reports from the Library of Congress to get answers to four basic, crucial questions about the DEZ process: What are the dangers in the use of the DEZ process? What is the potential of the DEZ process for mass applications or as a prototype for library installations elsewhere? What actual progress has been or is being made by the Library of Congress to develop an industrially viable upsizing of the DEZ process, which works in miniature in the laboratory, in order to deacidify the paper in masses of books? Finally, what is the intended scope of the use of the DEZ process by the Library of Congress on its own collections?

The report on pages 33-35 of this issue of *LJ* is the result of an examination of the documentation we have been able to amass on DEZ over several years. From that examination one can reach only one conclusion, that, inadvertently or not, the Library of Congress has not fully reported to Congress or the library community a number of very serious problems with the DEZ process and its wider application. A time of reckoning is at hand.

Only a year ago, one prominent member of the library preservation community, asked by *LJ* to comment on the news of the demolition of the LC pilot plant at Goddard Space Flight Center, lamented that "we know so little . . . we have to rely on the scientists."

Fortunately, information which will go far toward making informed decisions on deacidification is now (or will be shortly) available. The Library Technology Program of the American Library Association plans to publish an issue of its *Library Technology Reports* devoted to comparative information on methods of mass deacidification.

Edited by veteran Preservation Consultant George Cunha, who gave the preservation world a preview glimpse of it in May at Oxford, England, the report provides the most complete information to date on the facts about existing deacidification processes and is specifically designed to help library administrators make informed decisions in this area.

There seems to be little doubt that the Library of Congress has taken a wrong road with DEZ, but LC is apparently still determined to convince the U.S. library community to follow. Why has LC persisted with DEZ when other avenues of research are so much more promising and have already resulted in both successful operating plants and vigorous research with alternative chemicals?

The seeming inability to abandon behavior that is manifestly unfruitful has been noted in gambling addicts, and has lately drawn the attention of behavioral scientists, who are using the term "entrapment" to describe such behavior, whether observed in human relations, gambling, business, or politics.

Sometimes it seems that there is an epidemic of "entrapment" in government: the Sergeant York gun that, after millions spent upon it, just doesn't work; the predilection for backing the finally discredited losers in international affairs; the loss of the *Challenger*. The DEZ process belongs right alongside these failures.

In the inscrutable West, the ultimate disaster appears to be loss of face; fear of it seems often to be the strongest motivation for persisting in folly. But when the whole world can see the egg on your face, it's time to wash it off.

Karl Nyren

Senior Editor

The DEZ Process and the Library of Congress

By Karl Nyren

THE SEARCH for a solution to the problem of the deterioration of books due to the acid in the paper upon which they are printed spans several decades. A number of chemical processes to deacidify a volume have been developed in that time, and currently at least two are claimed to have potential as "industrial" processes for use in applications that can deacidify thousands of volumes at a time.

The Library of Congress has opted to use a process involving the volatile chemical diethyl zinc (DEZ), and for several years has been engaged in experiments and projects to develop a prototype plant for massive applications of the DEZ deacidification process, with the aim of developing a prototype process for worldwide adoption of the DEZ-based method for the mass deacidification of books. The process would be used on both old books already deteriorating on library shelves and new ones being added to library collections.

In statements made public over a number of years, the Library of Congress has:

- Asserted that the diethyl zinc (DEZ) process is safe;
- Proposed that it be a model or prototype for deacidification plants to be built around the country;
- Reported steady progress in achieving a successful process; and, inadvertently or not,
- Allowed the impression to be created that 13 million older books now disintegrating on LC shelves are the prime reason LC has proposed building an $11.5 million deacidification plant at Fort Detrick in Maryland.

The danger of DEZ

The inherent danger of the basic chemical involved, diethyl zinc, has been known all along. LC has claimed for years that it has successfully harnessed DEZ for mass deacidification.

Early in the LC effort to move the DEZ process from miniature scale in the laboratory to an industrial process, a project was contracted to an engineering team from Northrop Services, Inc. Working at the NASA Goddard Space Flight facility, the team went to great pains to educate themselves about DEZ, spent several days at the plant of the Stauffer Chemical Company, the Houston manufacturer of DEZ, and worked out ways to transport and handle the chemical.

DEZ is too dangerous to ship except in sealed steel cylinders, in a dilute solution with oil, and then not in any vehicle carrying passengers or traveling by air. It can be shipped by UPS.

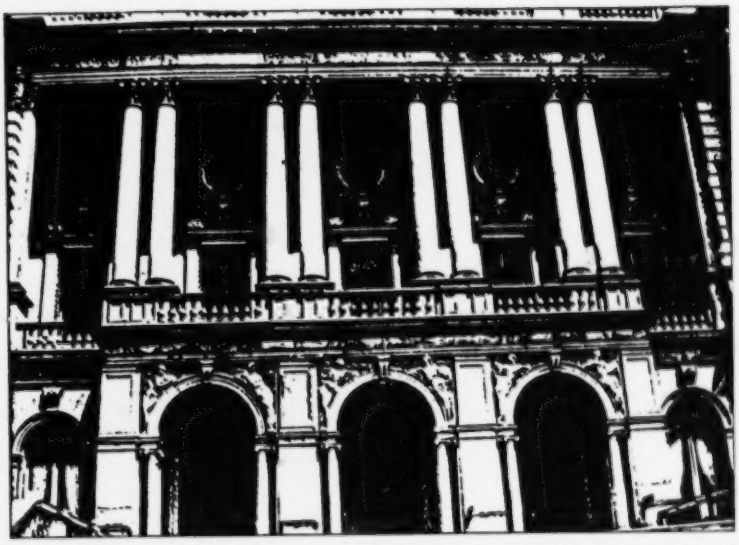
The Northrop Services team designed a process which they considered safe, one in which the risks of any serious mishap were rated as close to zero. That rating was disputed by one member of the engineering team who felt that the hazards of DEZ had not been fully explored. As safety engineer for the job, he sounded the alarm and was allowed to resign. The project proceeded without him.

Success in harnessing DEZ has been regularly announced by the Library of Congress:

In 1980, LC Research Scientist George Kelly said that "The process now appears ready for commercial use," with the warning that it should not be set up in a library or residential neighborhood.

In the LC *Information Bulletin* of April 23, 1984, it was said that "The safety aspects of [DEZ] have been completely defined and the handling of diethyl zinc by trained operators has been reduced to a routine matter. The process is entirely safe to personnel and the environment and presents no damage to the books being deacidified."

Karl Nyren is Senior Editor at *LJ*



On May 7, 1984, on the basis of LC testimony, the House Committee on Public Works and Transportation said that "The Library of Congress has successfully demonstrated that DEZ can be safely used and the element of risk connected with its use substantially minimized if not eliminated."

On August 2, 1984, Congress was told that "The Library of Congress, in cooperation with NASA and an independent safety consultant, undertook a detailed, step-by-step analysis of the equipment used in the process to evaluate risks in the engineered design. This analysis resulted in numerous changes in the design to eliminate any potential hazards, and these changes will be incorporated in the facility at Fort Detrick. As currently engineered, the Library of Congress states that there will be absolutely no safety risks to personnel or books with the Library of Congress process."

On the basis of reports like these, Congress appropriated $11.5 million to build a plant for the Library of Congress process at Fort Detrick. On February 20, 1986, although there had already been two fires and an explosion, all unexplained, at the Goddard installation, and LC was admitting that one of them "may be due to incompatibility of materials in the piping system," the Library of Congress was admitting to no more than a delay. On the following day, February 21, 1986, the plant at Goddard was ordered demolished by NASA, which found the safety factors unacceptable, despite a previous study, noted above, which had set the risk factor at close to zero. According to a draft report by NASA personnel, due to be released in late July, but not yet available, the demolition, it was learned, may have averted a truly massive explosion.

Neither Congress nor the library community has been told of the preponderance of evidence for the danger and unmanageability of DEZ. In an address delivered May 19, 1986 at Oxford, England, LC Scientist Donald Sebera did not even mention the fires, explosions, and final demolition of the LC pilot plant, although it was alluded to by at least one other speaker.

The DEZ process as prototype

The Library of Congress has repeatedly claimed that its process would provide a prototype, not only for deacidification plants in this country, but for the world. Congress likes to have the money it grants bear fruit, and accepting LC's assurances that it had tamed DEZ, it listened to Librarian of Congress Daniel Boorstin, at the April 11, 1984 U.S. Senate Committee on Rules and Administration, saying that "The facilities for which we seek authorization can be a prototype for others in the United States and so encourage economies of preservation and acquisition for all our nation's libraries."

The downplaying of the safety risks that would be associated with placing facilities using this volatile, and still not fully understood, process has made the notion of "prototype" facilities seem credible to both Congress and the library community.

Progress claimed

Details of the DEZ process have never been released by the Library of Congress, although they have been requested. It may be that full information to convert the process to an "industrial" one simply doesn't exist, since the development of the DEZ process has proceeded only as far as the chemical engineering involved. Development of an industrial process is still not accomplished, although it would seem to have been a reasonable expectation of the Con-

gress when it appropriated $11.5 million for the facility.

Past LC reports made it seem that, even years ago, the process was sufficiently developed to be described in detail and considered a finished product.

In September 1980, George Kelly told the Society for Archives and Institute for Paper Conservation that "After five years of development, we now believe the diethyl zinc process is ready for commercial use. Large-scale trials of this process have been described in a paper presented at the sixth AIC Annual Meeting in Fort Worth, Texas in June 1978. At that time, some problems remained, but they have now been resolved." Kelly also predicted, in the first of many target dates, that LC would "possibly begin treatment of the collections in 1982."

In the footnotes to his paper, Kelly gave the first public report of a 5000-book test of the DEZ process, claiming that, "The books were thoroughly tested by the Library of Congress for complete effectiveness of the treatment . . . ."

Not reported to Congress and the library community was the fact that nearly 50 percent of the books which were put through the process were not fully deacidified and many were actually damaged. These two facts have been left out of almost all reports, although LC officials have shared with nonlibrary audiences on more than one occasion.

Donald Sebera, speaking at the 1983 American Institute for Conservation Annual Meeting of the Book and Paper Specialty Group on the results of the 5000-book test, also referred to it as a "success," although he admitted that of the 5000 books treated, "we were estimating somewhere on the order of 50 to 55 percent were fully treated." Sebera's remarks were transcribed from an unedited tape of the meeting.

In August 1983, Peter Sparks, director for preservation at LC, told an IFLA audience that the DEZ process had been "successfully demonstrated . . . at the large-plant level with about 6600 books [formerly referred to as 5000] treated." He predicted an operational plant for late 1985 at the earliest and claimed: "We are in the home stretch of making [the DEZ process] available for production treatment."

On March 17, 1986, after the pilot plant had been blown up by NASA order, the Library moved its timetable ahead again, but in wording that made it appear that no change had been made, referring now to the "scheduled completion of the project within a time frame close to the original one of 1988."

Which books to save?

On the occasion cited above, Sebera said that the Fort Detrick plant was designed primarily to handle new acquisitions. According to Sebera, "We're concerned only with, in this development stage, new, nonrare books. These books will be processed by the DEZ process before being put on the shelf for use in the collection. Later than it may well be, and we expect there will be, some application to older materials. Perhaps manuscripts, perhaps older books in the collection. But, the design is for new books, of a nonrare type."

Further on, Sebera says that "within 20 years we expect that this process will not need to be used to any great extent. We will be in the secondary format, will be either optical discs or some others, and the new books coming out, probably many of them will already come in these secondary formats."

Various figures have been cited, but new acquisitions at LC are expected to number 350,000 a year. With a capacity of 300,000 books a year, Fort Detrick, at best, would be able to deacidify 200,000 of the 14 million older books in the LC stacks each year. In 20 years that would be four million books.

Much of the support for mass deacidification has been in response to appeals based on the potential loss through deterioration of millions of volumes of irreplaceable treasures. While new acquisitions will be preserved for the ages, books now on LC shelves will be "systematically" treated. The choice of the term "systematic" suggests that LC does not plan to deacidify all its older books or to preserve them in their original form.

Appeals for support of the DEZ process have usually been made in the name of these older books. In 1971, LC Scientist John C. Williams, in a paper on the chemistry of deacidification, said "Libraries today are hospitals for sick books . . . . the Library of Congress . . . has six million volumes too brittle to circulate."

In 1974, Williams and Kelly in a joint paper noted that "the Library of Congress has six million books which are already in such a condition that they should not circulate and . . . the whole collection should be neutralized and buffered to halt the degradation . . . . [in the United States] there must be 100 times this or 300,000 tons in the emergency class."

Again in September 1980, Kelly said, "The Library of Congress has six or seven million books which are so deteriorated that they should not circulate and with some exceptions, the whole collection should be neutralized and buffered." The diethyl zinc process, he said, is ready to solve the problem.

According to the *Washington Post* on February 21, 1986, Sparks, joining Boorstin at a House budget hearing in testimony on the effect of the Gramm-Rudman-Hollings budget cuts, referred to the deacidification project as one intended to "remove acid from most of the library's 13 million books."

Alternatives to DEZ

Alternatives to the use of DEZ and other zinc compounds exist, and even now are being used successfully and safely, both at Princeton and at the National Archives of Canada, where one process, based on magnesium rather than zinc, has been working since 1971. The British Library is reported actively developing a somewhat similar chemical approach, as is France's Bibliothèque Nationale.

LC's response

A letter in the August issue of *LJ* (p. 12, 14) by Sparks claimed that there were several inaccuracies in the April 1 *LJ* news story (p. 12) on the demolition of LC's test facility at the Goddard Space Center.

Key questions

One purpose for this review of the DEZ information above is to provide further documentation for statements in that April 1 *LJ* report. The issue of whether the Congress or the library community have been properly informed regarding the DEZ process hinges on such matters as the danger involved in the DEZ process, the likelihood of the system being a useful prototype for similar plants to be built around the country, the accuracy of reports of progress made toward a successful process, and the primary objective of the mass deacidification plant to be built in Maryland.

The key question, of course, is why the Library of Congress has persisted in backing the DEZ process when the expenditure of years of effort and untold funds to make it work have come to so little. Congress and the library community should expect a credible response.

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The Deputy Librarian of Congress responds to LJ's September reports on the DEZ process

In Defense of DEZ: LC's Perspective

By William J. Welsh

IT WAS MOST disappointing to find both an editorial and an article by a senior *LJ* editor about the DEZ process (*LJ*, September 15, p. 4, 33-35) that so misrepresents the role of the Library of Congress in the development of this important breakthrough in preservation technology. Neither the library profession nor its premier journal is served by misleading and vitriolic reporting especially when it involves the discussion of a topic as complicated and crucial as mass deacidification of library materials. In an attempt to set the record straight, I would like to respond to the five points raised by Nyren:

1. Is the diethyl zinc (DEZ) process dangerous?

2. Is the LC DEZ process/plant intended to be a prototype for deacidification plants to be built around the country?

3. Has the Library of Congress misrepresented the progress and success of the DEZ process development?

4. Which books in LC's collections will be deacidified with DEZ?

And, finally:

5. Why has the Library of Congress persisted in the development of the DEZ process?

William J. Welsh is Deputy Librarian of Congress

"Neither the library profession nor its premier journal is served by misleading and vitriolic reporting especially when it involves the discussion of a topic as complicated and crucial as mass deacidification of library materials"

Safety and DEZ

Diethyl zinc, first described by scientists in 1849, has for many years been used as a catalyst in the production of common plastics, including polyethylene, polystyrene, polypropylene, and polyester. DEZ is produced as a liquid, and in that form is pyrophoric, i.e., it burns spontaneously when it comes in contact with the air. When used as a deacidification agent, DEZ is vaporized into a gas in a contained vacuum environment where, as a gas, it is not pyrophoric.

Because it is produced and shipped in liquid form, DEZ requires special handling as do gasoline, natual gas, and other industrial chemicals to insure their safe transport and storage. Liquid DEZ does not detonate through physical impact or ignition, and when properly containerized is certified for shipment by normal truck and rail transport and poses no hazard in storage at normal temperatures. In a closed vessel, DEZ remains stable for years. Once received at its destination, appropriate safety measures are put into place in handling the chemical during its transfer from the storage tank to the chemical delivery system for vaporization into the gas phase and commencement of the deacidification process in the treatment chamber.

The Library knew from the beginning that strict safety measures would be necessary when handling DEZ, and so informed the Congress prior to authorization of funds to build the DEZ plant. Subsequently, extensive studies were undertaken, procedures outlined, and precautions recommended to meet safety requirements. Unfortunately, the engineering contractor at NASA made several design and procedural errors in developing the DEZ test facility, the consequences of which are well known and have been openly described in great detail in the Library of Congress Information Bulletins.

Having learned from this experience, the library remains confident that DEZ can be handled safely in the same way that millions of pounds of pyrophoric materials have been manufactured, transported, and used worldwide by the chemical industry for decades.

The advantages of the DEZ deacidification process for the treatment of the collections of the Library of Congress are so compelling that we consider the effort required to develop appropriate handling strategies for DEZ to be fully justified.

The DEZ process as a prototype

The enormous scope of the preservation problem at the Library of

Congress was determined, after careful study, to be best addressed by gas-phase deacidification, with diethyl zinc as the gas, for the following compelling reasons:

1) size of the collections (13 million volumes in our general and law collections alone);

2) high acid content of the collections (greater than 80 percent with pH 5 or lower because of the large number of materials collected from around the world); and

3) diversity of materials to be treated (an endless variety of sizes, formats, media, and bindings).

These considerations led us to seek a vapor-phase deacidification process with DEZ as the gas of choice rather than a mixed-solvent aqueous or nonaqueous liquid process utilizing some other chemical. We are satisfied with our choice because gas-phase deacidification with DEZ meets all our criteria for an effective deacidification treatment that will enable us to deal efficiently with large numbers of items without preselection or sorting to eliminate unusual material or soluble media.

Technically, the LC deacidification plant to be built at Ft. Detrick, Maryland could be viewed as a prototype for others at the same size or at a smaller scale. Each library or archive that is considering the mass deacidification of its collections will have to make its own evaluation and decision, based on its own circumstances. Like LC, they will have to examine their collections, staff, resources, and needs and match them with the technical aspects of the process that are most suitable for their institution.

We anticipate that our plant will, by its successful operation, be a useful example and model for others to consider and perhaps emulate. We would encourage such developments, in any way we can, to contribute to the solution of the acid-paper problem that we all face in one degree or another.

Progress and success claimed

The Library of Congress has been working toward the solution of the mass paper deacidification problem for more than ten years. Starting with its first successful experiment with a few books in an ordinary kitchen pressure cooker, the library has progressed to the sophisticated facilities of a Goddard Space Center and its widely reported 5000-book test in 1982. This test proved out the concept of DEZ mass deacidification (more books were thoroughly deacidified in the test than have ever before been deacidified in one chamber) and identified problems associated with treatment at that scale that were solved with subsequent testing.

"The Library knew from the beginning that strict safety measures would be necessary when handling DEZ, and so informed the Congress prior to authorization of funds to build the DEZ plant"

Which books to save

Deacidification and the formation of an adequate alkaline reserve will extend the life of a book three to five times. Deacidification cannot resurrect the lost strength of a book, it can only capture the paper's strength at its present level. If a library's collection is to survive as *long* as possible, then deterioration of paper must be arrested as *soon* as possible. Paper ages (loses strength) rapidly at first and more slowly when it is older. To derive the maximum benefit from deacidification, the book should be treated while the paper is still relatively new and strong. Treating materials en masse before they are added to the collection is logistically easier than trying to identify and find newer books that have already been shelved.

While we are interested in getting in front of the problem of acid deterioration by treating new materials, we also want to move as quickly as possible on older acidic materials that are rapidly losing strength and will soon be too fragile to survive normal handling safely. This two-prong approach has been our strategy from the outset and has been well documented in Congressional testimony and in many talks to professional library groups. The manner in which retrospective materials will be chosen for deacidification has been established and the library's Preservation Policy Committee has worked out a systematic approach that includes the treatment of retrospective materials using the LC book classification system.

Why stick with DEZ?

We have pursued the development of DEZ for the treatment of our collections because it offers a number of advantages that meet our needs. First, by using a gas-phase treatment, the effects of solvents on ink, colors, adhesives, and other solubles in papers are eliminated. Therefore, no preselection of books to remove or isolate solvent-sensitive materials is required. Second, a gas-phase process enables uniform treatment of the book through gaseous diffusion of the small DEZ molecule throughout the pages and fibers. In so doing, all the weak and strong acids in the papers are neutralized.

Third, in a separate reaction, DEZ forms an alkaline reserve that is deposited uniformly at an optimal level throughout the materials, thus stabilizing them against future deterioration. Fourth, DEZ is efficient. It is good for any format, regardless of dimensions, and works on all paper including groundwood and coated stock. It works fast, which makes possible a high production capability. It does not alter colors or inks, has no effect on the adhesion of labels, and is safe for other materials used in books. The alkaline reserve, zinc oxide, has tested safely in toxicological studies for skin and mucous membranes. As an extra bonus, DEZ inhibits mold growth in paper and the total DEZ process may have biocidal activity.

Given the facts, the Library of Congress feels confident that it is acting responsibly and prudently in pursuing a mass deacidification strategy based on gas-phase DEZ technology. Our purpose is to preserve the national collections from the devastating effects of acid in paper, on a truly massive scale, and to do so without damaging the books in any way. A successful effort will be of incalculable value. We seek the active support of others who share our vision and might profit by our example and hope that *LJ* will, in due course, join us.

DEZ is all we've got

Nyren's editorial ("It's Time to Dump DEZ," September 15, 1986, p. 4) raises questions about the DEZ process which only work underway at the Library of Congress can answer. It has been established that DEZ is an effective agent for mass deacidification; what remains to be done is the engineering to make that method practicable and safe. Dumping the project now will give us nothing for the funds invested. Much of the project is experimental, and it endured some setbacks. But these certainly do not warrant a hyperbolic analogy with the *Challenger* disaster. What seems to have failed is not the DEZ process but the nerve of some who have most to gain from its success. The fact that the chemical is highly flammable should not be a deterrent; such materials have been harnessed before, as the familiar example of the internal combustion engine demonstrates.

It is interesting to me that this work at LC is, to date, the only effort being made in the United States on mass deacidification of library materials. We know there are other methods, but they have not been tested in pilot projects that would be helpful and informative to the library community. There is recent evidence that the commercial sector will not develop such technology. I am surprised that no research university has offered to combine the strengths of its library with its departments of chemistry and engineering to undertake such work—especially since that kind of project would be eligible for consideration in the funding category which I administer at NEH. But such an effort would rely on the support and participation of the library community, which would not be forthcoming if Nyren's views are in any way typical of the profession.

Prospective preservation, after all, offers only three choices: use of acid-free paper, improvement of the storage environment, or deacidification. Thanks to librarians and directors of university presses, we have national standards for paper permanence. We know what needs to be done to improve storage environments, but deacidification still has only one appropriately funded pilot project underway. We should all be grateful for that, but recognize the need to do more.

—Harold C. Cannon, Director, Office of Preservation, National Endowment for the Humanities

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Baughman's "Sense Is Preferable to Sound" (*LJ*, October 15, 1986, p. 42-44) demonstrates that more than one town has a claim to the first public library. We certainly think we do; read all about it in *LJ*, June 15, 1978 (p. 1223): "At Salisbury, Connecticut the first known municipal taxation came about in 1810 . . . ." This earliest tax support for a library was prompted by a gift of books for youth, but the tax funds supported an existing library for adults as well. These claims depend on how you define your terms, but on any terms, Baughman seems to have overlooked us, and we'd like to set the record straight.

—Sara B. O'Connor, Director, Scoville Memorial Library Association, Salisbury, Connecticut

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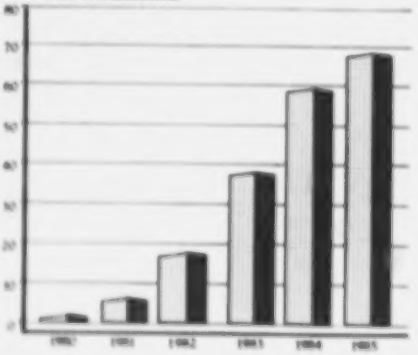

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LETTERS

Try, try again with DEZ

Nyren's editorial and article (*LJ*, September 15, 1986, p. 4, 33-35) point to the conclusion that the Library of Congress ought to dump DEZ. Even if Nyren's statements are correct, I would not like to see LC dump its research on DEZ, when so much time and energy has already been invested in bringing DEZ so near the point of completion.

Continued research on deacidification with DEZ is warranted by the critical importance of finding a solution to the problem of large-scale deterioration of library collections and the need for a mass deacidification system engineered specifically for the needs of LC. The problem is far from licked. While no one can be certain that the research on DEZ will ultimately lead to the development of a production technology, the more approaches we try, the more likely it is that we will find a viable solution.

LC has one of the few laboratories in this country capable of undertaking scientific research and engineering development, in a field which generally lacks any initiatives in this area. The support of the research on DEZ to date has been an invaluable contribution to the preservation field.

Although the two fires at the experimental facility at the Goddard Space Flight Center were unfortunate, the lessons learned from these setbacks can only result in a better system. The whole purpose of the extensive testing program is to debug the system now, rather than later. If problems are identified and addressed in the testing phase, then the testing program is meeting its purpose. LC has already invested thousands of hours of staff time in proving that the chemistry of deacidification with DEZ is sound. The program should not be abandoned because there are snags or failures along the way. The setbacks should be seen as a part of the course of any research and development process.

The dedicated preservation staff and scientists at LC must be able to continue their work in an atmosphere of support. They should not be condemned to failure prematurely before their investigation is complete.

—*Ann Russell, Director, Northeast Document Conservation Center, Andover, Massachusetts*

THE ABBEY NEWSLETTER
Bookbinding and Conservation
c/o Preservation Department, Harold B. Lee Library, BYU, Provo UT 84602

AN March 1987 v.11 #2 25

Accident/Illness Reporting and Investigation

Most places have some sort of reporting mechanism for serious accidents and illnesses. Investigations of the causes of these accidents or illnesses can result in recommendations that can prevent a recurrence. However, cut fingers, spills, headaches, eye irritation, dermatitis, and other minor problems are often ignored until more serious manifestations such as a missing finger, liver damage or chemical pneumonia result. If these earlier, minor problems had been reported, investigated and their causes corrected, then the more serious problems might have been prevented.

A formal reporting mechanism for all proven and suspect occupational illnesses, accidents and spills, including near misses, should be developed. A report form to be filled out by the supervisor should be provided for this purpose. In some instances the health staff may be the ones to discover problems. In such a case they also should fill out a reporting form.

These reports should go to the Health and Safety Committee which should designate someone to investigate the causes of the problem and to recommend corrective action. The resulting investigation report should be discussed by the entire Committee and its recommendations recorded in the minutes.

LIBRARY JOURNAL ATTACKS LC

The September 15 Library Journal carried a hostile and uncalibrated article by Senior Editor Karl Nyren, entitled "The 382 Process and the Library of Congress." It can be taken as a cautionary example of how wrong anyone can be when they venture into areas outside their range of expertise.

Nyren feels that LC has been deceiving the public and Congress: its real purpose in developing a mass deacidification process using diethyl zinc has been to push it as a prototype for world use--not to deacidify its own books. LC, he says, deliberately misled Congress in order to get the $11.5 million for its deacidification plant: it gave the impression that it was going to use the DEZ process to preserve the 13 million books now in its collection, whereas the plant's capacity will be too small to do much more than keep up with incoming books. He sees NEVA not as a rather inept contractor, but as a white knight that blew up the pilot plant at the Goddard base on February 20, 1986, because it "found the safety factors unacceptable." The so-called deacidified "may have averted a truly massive explosion."

It is far easier to make careless allegations than it is to disprove them. Perhaps it is even foolish to try to disprove them one by one, especially when there are so many as there are in this article (at least 13 on the first two pages) and when so many of them are only slurs, suggestions or vague statements that are impossible either to prove or to disprove. A very calm, effective rebuttal by William J. Welsh was published in the next journal, p. 62-63 of the January issue ("In Defense of DEZ: LC's Perspective"). Nevertheless, certain facts of the case need to be made part of the record.

First of all, LC's motives. Nyren says he wants to know "why the Library of Congress has persisted in backing the DEZ process." Of course, it is to deacidify books and prolong their lives. If Nyren had been listening all these years, he would not now have the feeling that the truth has been kept from him. He would also not have gotten the impression that LC was going to use DEZ to rejuvenate the old books now in its collection. He would have realized that people in preservation have been talking about the millions of brittle books in library collections because if we do not start deacidifying on a large scale now, there will be even more millions of them in the future. And the DEZ process works. It works on a grand scale. Nyren calls the 1982 trial of 5000 books a failure because the gas did not fully deacidify more than half the books put in the chamber; but by this reasoning, the Wright Brothers' flight at Kitty Hawk should be called a failure because the plane was not able to stay in the air for more than 12 seconds.

NASA did not blow up the pilot plant because of concern for safety with DEZ, it blew up a pipe, probably unnecessarily, because it thought there was some liquid DEZ packed in it and building up pressure. The reason they got into this spot was that the system had not been designed with adequate pressure valves and monitoring instruments in the chamber or pipes. The test facility was designed by NASA, not LC.

To give an idea of Nyren's command of facts: he calls the Society of Archivists the "Society for Archives" and the Institute of Paper Conservation the "Institute for Paper Conservation"; he says, on page 71, that Peter Waters said in 1983 that 4000 books had been treated by the process, but that this was "formerly referred to as 5000" books earlier. There were 5000 books in one trial, but there had been other smaller trials; he says that George Kelly reported the 1982 trial at the meeting at Cambridge in 1981.

In his rebuttal, William J. Welsh says that diethyl zinc has been used for years in the manufacture of common plastics, including polyethylene, polypropylene and polyester. Like gasoline, natural gas and other industrial chemicals, it requires special handling. Because of the diversity of materials in the Library of Congress, gathered from all over the world, the deacidification process must be safe for stained materials and soluble media; DEZ is safe enough to be used without any pretesting procedures. Both current and retrospective materials will be treated. LC has been working on deacidification for over 10 years. Its purpose is "to preserve the national collection from the devastating effects of acid in paper, on a truly massive scale, and to do so without damaging the books in any way."

At this stage in the history of preservation, no one knows which deacidification method or methods will be the most widely used, or how many tons must still be invented in the future, but it really does not matter. All effective means should be used, as soon and as intensively as possible. The Library of Congress is a pioneer, and a world leader in both a formal and an informal sense. It deserves the support of all librarians, even--especially--those who are senior editors of the Library Journal, and who are the spokesmen in the American Library community.

Mr. OWENS. No further questions.

Mr. WILLIAMS. Mr. Hayes.

Mr. HAYES. Thank you, Mr. Chairman.

I just wanted to, for the record, indicate that my tardiness this morning certainly does not in any way imply my lack of interest in the subject matter before this subcommittee. It just so happens that we schedule subcommittee hearings sometimes so close together that they conflict in time. I had another subcommittee which began a half hour before this one, and once you get locked into it, it is hard to leave to go to another one.

Thank you very much.

Mr. WILLIAMS. Thank you.

Mr. Sparks and others of you that would want to respond to this, including you, Mr. Welsh: Mr. Owens had said in effect that the great hope for this problem lies in deacidification rather than microfilming .

When I asked Dr. Gregorian for his thoughts concerning those two competing interests—although we recognize they are not truly competing, but rather, both aiming toward the same goal—he indicated that microfilming, if I recall—if I am reflecting his responses correctly—he indicated that microfilming was of more certain immediate importance.

I would like Mr. Sparks and perhaps others of you to give us a direction.

Mr. WELSH. May I begin, Mr. Chairman, thank you for the opportunity.

The Library of Congress has been dedicated to the task of microfilming since 1968. We have in that period microfilmed 400,000 volumes. We believe, as Mr. Haas and others have testified, that it is the way to go to solve the brittle book problem. We are really dedicated to that.

There isn't any other technology that is going to address that problem at this time.

Mr. SPARKS. Let me just make one comment here, Mr. Chairman, which gets at Mr. Owens' point. The dimensions of the problem here—if you look at LC's collection which is representative of many research library collections—is that 75 percent of our collection is not brittle, and 25 percent is. We are struggling with the 25 percent to try to save the contents of this material through micro filming.

If we can prevent that 75 percent from getting brittle, that is a really important task. That is why deacidification, as a technology, is important to put in place.

Mr. WELSH. Deacidification would, of course, approach the problem prospectively and microfilming the brittle books does it retrospectively. If we can address the immediate problem by microfilming, and solve the problem for the future, then we will avoid this problem that we now have.

Mr. WILLIAMS. Ms. Huxley?

Ms. HUXLEY. There is an additional element as well prospectively, and that is the encouragement of publishers, and also of governments at the Federal and State level. To do something different in terms of their ordering paper, to begin to press on a large scale for the use of paper that isn't acid to begin with.

Mr. WILLIAMS. We do need to consider that. I notice that this book isn't printed on acid-free paper either—the Report on Brittle Books.

Ms. HUXLEY. Yes, it is.

Mr. WILLIAMS. Oh, it is?

Ms. HUXLEY. Yes.

Mr. WILLIAMS. How can one tell that from looking at a publication?

Mr. HAAS. In the last couple of years the American National Standards Association formally set a standard for permanent and acid-free paper that includes not only a sentence or two to that effect but a symbol of infinity. That infinity symbol is being used—I think it is not in that one——

Mr. WILLIAMS. No, that's why I——

Mr. HAAS [continuing]. But the statement is in there that is acid-free paper.

Mr. WILLIAMS. I see.

Mr. HAAS. Probably about 25 percent of the paper that goes into books today is acid-free. That number is slowly——

Mr. WILLIAMS. Twenty-five?

Mr. HAAS. Percent of the paper that goes into principally major published books today is probably acid-free. University presses, for example, almost uniformly use acid-free paper.

Mr. WILLIAMS. Yes.

Ms. Huxley, you mentioned we need to sound the alarm, fight the fire, and save things all concurrently here if we can. You also stated that we need national leadership to provide both appropriate authority and funding.

Mr. Weber said that a major share of the start-up costs should be a Federal responsibility.

Chairperson Cheney indicated that the infrastructure was not yet in place to absorb increased Federal funding, or perhaps increased dollars from any source—certainly increased Federal funding.

Given those thoughts, will you expand some on what you think the appropriate immediate Federal role would be, because that is the primary purpose of this hearing. We are not only trying to sound the alarm with you—which hopefully we have helped accomplish—but we would also like to be able to fight the fire, and we want to aim our hoses at the right place here.

Ms. HUXLEY. We hope that the Library of Congress' work will enable us to be fighting with more than buckets, which we are doing.

Mr. WILLIAMS. The bucket brigade.

Ms. HUXLEY. I will answer the question nationally, but to say that we have found in our two years experience in New York that $2 million—I won't say a drop in the bucket—$2 million does not do the job even for us. The Regents have requested an increase to $3 million immediately. We could have used that $3 million last year because the pressure on those funds is great.

It is my feeling that while there is a great deal to do—and the job of coordination, even in our State, is not easy—that it is appropriate to begin to save what we can even as we improve strategies

for coordination and work out the details of assuring a smooth operation.

I believe the same thing is true at the national level. The problem is so urgent that we simply have to risk a little with prudence and provide the money to get started. We know that there are major collections of major importance to all of us residing at the Yale University Library, for example, and not available even to researchers at Yale, but could be available to researchers in New York and in Montana and across the country, if we got started and took care of those collections. The same is true at those other major libraries.

I would think that a tenfold increase in the level of funding that is available at the national level would not be too much.

Mr. WILLIAMS. The infrastructure in New York and in the facilities with which you are familiar is appropriately in place to properly absorb that significant a percentage increase in funding?

Ms. HUXLEY. You are assuming that the Federal money—you mean our increase or yours, I'm sorry?

Mr. WILLIAMS. I don't know where the increase would come from. The indication that I had from others who testified was that the infrastructure might not be in place to be able to appropriately absorb significant increases in funding, wherever that money came from. Is that——

Ms. HUXLEY. I believe that in a facility like the New York Public Library, for example, which has a massive problem, that if the money were available—and that is certainly a national library, almost as the Library of Congress is—if the funding were available—I don't want to speak for Vartan Gregorian, but it would be possible to contract out work to get going on those identified collections which are standing in line at the moment.

Mr. WILLIAMS. Mr. Haas?

Mr. HAAS. Over the last three or four years, the level of activity has in fact gone up. I have no doubt at all that a rapid increase in the amount of available funds specifically geared to the brittle books could be effectively, intellectually, and technically put to use. A new microfilming facility was established last October in Lehigh University, owned by a consortium of Middle Atlantic State universities. That facility, by the end of March, will need new space, will have five cameras going full time, films developed, processing equipment—and it is a going enterprise.

It has got its work cut out for it. They could now, I think, keep five cameras occupied for one shift for the next year with the work that they already have lined up from a number of universities around the country without advertising their availability. The capacity is there, in some areas the bibliographic machinery is in place. The large general research libraries that have in fact taken the lead in creating preservation programs can very quickly scale up their capacities.

We are on a plateau now. We have demonstrated, I think, that we can in fact accomplish what needs to be done in each step along the way. But a kind of giant step is needed. I have been in this almost as long as the Council. I have just no question that the time is right and that persuasions, action at this point in time will in fact stimulate imagination and participation.

This is an area where the library world and the university world are speaking with one voice, and that that in itself is of great importance.

Mr. WILLIAMS. Mr. Boorstin?

Mr. BOORSTIN. Mr. Chairman, may I reinforce a point that Major Owens made, which I think is the heart of the matter, and that is, we have been talking about materials and philosophies, while what we are really concerned about is access—the access of our citizens, present and future, to the sources of knowledge. This is a total picture of the problem which has at least three aspects to it: One, to save what can be saved, and if necessary, spend the $50 a volume that we have to spend to put something on microfilm, but also, be sure that the microfilm reading machines are out there so people can profit from that $50 a volume.

Secondly, we should pursue the program of preventive maintenance, which the Library of Congress has been doing through deacidification, which, if successful, will preserve a volume at a cost of only $5.00 a volume for four or five hundred years.

Finally, we should pursue an educational program for publishers and printers to persuade them to use acid-free paper so it won't be necessary to disacidify.

All of these we should pursue. I think that some of us have even thought it might be desirable—the infinity symbol is good education, but also it is concealed, following the example of the Surgeon General, it might even be possible on the back of a book the statement that this book may be dangerous to your library. That is part of the process of education.

It is a total problem—a problem of making the sources of our culture available, and each element in it is significant and needs the help of the Congress, Mr. Chairman.

Mr. WILLIAMS. You can see we have a vote and we have to go respond to it. We very much appreciate the information that has been provided to this committee by this panel and the first panel as well.

I do want to note that this is the first hearing in this Congress by this subcommittee, we chose to have this early hearing on this important topic because of the obvious urgency and because, along with you, we wanted to help sound the alarm and see what we can do to fight these slow fires.

I thank you all very much.

[Additional material submitted for inclusion in the record.]

Prepared Statement of Hon. Thomas J. Downey, a Representative in Congress From New York

Mr. Chairman, first I would like to commend you for holding these hearings and thank you for inviting me to participate. I remember discussing with you the problem of preservation of rare and brittle books this past spring when we visited the New York Public Library.

I would also like to welcome the distinguished President of the New York Public Library, Dr. Vartan Gregorian, to these hearings. Dr. Gregorian has done a great deal to place this problem on the Congressional agenda and future generations will owe him an immense debt for his efforts.

When I read the Interim Report of the Committee on Preservation and Access of the Council on Library Resources I was struck by the statement that approximately one quarter of the collections of the Library of Congress and the New York Public Library are in danger of severe deterioration. In the words of the report they are ". . . so embrittled that they will soon become useless." I should add that this is not a problem involving just these two libraries, but one that affects libraries throughout the country.

Clearly we are in danger of losing a significant part of our cultural heritage. Were the Library of Congress or the New York Public Library to suffer some sudden disaster that threatened such a large part of its collection, people would sit up and take notice. They would demand that something be done. Our problem is that the threat is a quiet one and advances largely unnoticed by the public.

The Committee on Preservation and Access has been working over the past several years to develop a coordinated response to the problem and I commend them for their work. The Committee has identified this as a National problem. This is a problem which has grave implications for our political system.

Anyone who has ever spent any time in the reading rooms at the New York Public Library or the Library of Congress knows what a critical role these collections play in the public and political life of our Nation. Our democracy has thrived because it has never limited knowledge to an elite. The reading rooms are filled with such a great diversity of people - scholars with impressive lists of degrees and the self-taught, professionals and amateur researchers - all of whom have free access to the works that have shaped us as a people. Public discourse in the United States will be much the poorer if we have to restrict access to the collections because the books cannot be adequately preserved.

The task before us in Congress is to support the efforts of those who are trying to develop a program to preserve these books. The most direct way in which we can help is to provide adequate funding at the National level so that librarians and archivists can get on with the task at hand. I will do whatever I can to see that Congress authorizes the needed funds.

Once again, I would like to thank Chairman Williams for taking the initiative in holding these hearings. I am ready to work with you and members of the library and archive community.

PREPARED STATEMENT OF ARTHUR W. SCHULTZ, MEMBER, PRESIDENT'S COMMITTEE ON THE ARTS AND THE HUMANITIES AND CHAIRMAN, NATIONAL COMMITTEE TO SAVE AMERICA'S CULTURAL COLLECTIONS

Mr. Chairman, members of the Subcommittee, I am pleased to submit written testimony on the national problem of preservation. Millions of volumes in libraries, as well as important collections of maps, music scores, and historic documents are seriously deteriorating. While much of this material suffers from general wear and tear, exacerbated by frequent use and improper storage conditions, the problem is compounded by the fact that many books are printed on brittle paper. Due to an acid residue on paper produced in the mid-nineteenth century, virtually every item published during that period is beginning to crumble before our very eyes.

Last year, the President's Committee on the Arts and the Humanities and the National Institute for the Conservation of Cultural Property (NIC) began working together on a project to promote the care and preservation of America's cultural collections. We recognized that a lack of visibility of the problem and the cost of preserving our books are problems shared by all cultural institutions -- libraries and archives as well as museums and historical societies. We agreed that the key to improving preservation efforts across the country is to stimulate awareness of the problem and encourage support for action.

As a result, the President's Committee and the N.I.C. have created the National Committee to Save America's Cultural Collections. The Committee, a distinguished panel of experts combining the talents of conservation and preservation professionals, officers of major cultural institutions, and civic and philanthropic leaders, is considering this problem. I am honored to serve as the Chairman of this distinguished group, which consists of Arthur Beale, Lloyd E. Cotsen, Joan Kent Dillon, Stanley Freehling, Marshall Field, Peter C. Marzio, Emily Rauh Pulitzer, Peter G. Sparks, and James M. Wood. The Committee represents a major effort to involve the private sector in supporting conservation and preservation programs. In the past, these activities have been funded in the private sector by only a handful of enlightened foundations and corporations.

The goals of the Committee are: 1) to focus public attention on the urgent need to preserve cultural collections and significant architecture; 2) to bring a greater understanding of conservation and preservation activities to cultural institutions; and 3) to encourage private sector support for these vital efforts.

As its first project, the Committee is planning a pilot regional forum for cultural decision-makers, including museum and library trustees, corporate and foundation executives, and key professionals from the museum and library fields. The forum will be held from June 16-18, 1987, at the Art Institute of Chicago. Invitations to the forum will be extended to selected participants from Indiana, Illinois, Iowa, Michigan, Minnesota, Missouri, Ohio, and Wisconsin.

Entitled "Invest in the American Collection," the forum will address four major themes related to conservation and preservation: 1) the critical needs of our cultural collections; 2) the achievements and limitations of recent efforts to save cultural objects; 3) the current status of training, treatment, and research; and 4) the expansion of conservation and preservation resources. The forum will feature nationally recognized speakers and tours of notable Chicago-area conservation facilities.

Through this pilot forum, we hope to begin to build a resource network for preservation in the Midwest and provide a model for similar conferences in other regions of the country.

Mr. Chairman, members of the Subcommittee, we are gratified that through hearings such as this, the important problem of saving our nation's books is being brought to the public's attention. Thank you for the opportunity to discuss our efforts to help address this significant national concern.

About the President's Committee on the Arts and the Humanities.

The President's Committee on the Arts and the Humanities was created by an Executive Order of the President on June 15, 1982. The Committee, an outgrowth of the Presidential Task Force on the Arts and the Humanities, was established to assist in efforts to increase private sector support for the arts and the humanities. As the committee has evolved, it has focused its energies on the identification of current needs in the arts and humanities and ways to address these needs. Typically, these initiatives are organized to analyze and explore possible solutions and to set up specific projects. If a given initiative proves successful, the Committee then ensures that a mechanism is in place to replicate the project in communities or regions across the country.

The Committee is composed of the Chairman of the National Endowment for the Arts and the Chairman of the National Endowment for the Humanities, heads of a number of other federal agencies, and private sector members selected by the President who have an interest in and commitment to the arts and the humanities.

About the National Institute for the Conservation of Cultural Property, Inc.

The National Institute for the Conservation of Cultural Property, Inc. (NIC) was created in 1982 to succeed the National Conservation Advisory Council. NIC serves as a national forum for cooperation and planning among institutions and programs concerned with preserving our nation's cultural heritage. Its membership of more than 90 major cultural institutions provides an effective resource network for all types of conservation disciplines and programs.

NIC has participated in important national studies on collections care and works to increase awareness of collections needs within institutions. It serves conservation and preservation professionals through information programs and projects in support of research and training.

MEMBERS OF THE NATIONAL COMMITTEE
TO SAVE AMERICA'S CULTURAL COLLECTIONS

Arthur W. Schultz is the former Chief Executive Officer of Foote, Cone & Belding Communications and former Chairman of the Board of Trustees of the Art Institute of Chicago. He is a member of the President's Committee on the Arts and the Humanities, a trustee of the University of Chicago and chairman of the university's visiting committee for the humanities.

Arthur Beale is Director of the Research Laboratory of the Boston Museum of Fine Arts and former Director/Conservator of Sculpture and Objects, the Center for Conservation and Technical Studies, Harvard University Art Museums. He served as Chairman of the National Institute for the Conservation of Cultural Property for three years.

Lloyd E. Cotsen, a member of the President's Committee on the Arts and the Humanities, is President and Chief Executive Officer of Neutrogena Corporation. He is a trustee and board member of the Archaeological Institute of America and the American School of Classical Studies in Athens. Mr. Cotsen serves on the Advisory Council of the Art and Archaeology Department at Princeton University and of the Museum of Cultural History at UCLA.

Joan Kent Dillon, a professional volunteer in the arts and historic preservation, is past president of the Performing Arts Foundation of Kansas City, Missouri. She is a member of the boards of the National Trust for Historic Preservation and the League of Historic American Theatres. She is a member of the President's Committee on the Arts and the Humanities and of the Governors Board of the Nelson Gallery of Art.

Stanley M. Freehling is Senior Partner in the firm of Freehling and Company and a member of the President's Committee on the Arts and the Humanities. He is Vice-Chairman of the Board of the Art Institute of Chicago and Chairman of the Art Institute's Film Center; at the University of Chicago, he chairs the visiting committee for the visual arts and is a member of the visiting committee for the humanities.

Marshall Field is Chairman of the Field Corporation in Chicago, Illinois, and former publisher of the Chicago Sun-Times and the Chicago Daily News. He is a trustee and Vice-Chairman of the Art Institute of Chicago and the Field Museum of Natural History, a trustee of the Museum of Science and Industry, and a member of the Board of Directors of the Field Foundation of Illinois.

Peter C. Marzio is Director of the Museum of Fine Arts in Houston, Texas, former Director of the Corcoran Gallery in Washington, D.C. and formerly Associate Curator and Chairman of the Department of Cultural History of the Smithsonian's National Museum of History and Technology.

Emily Rauh Pulitzer is a Commissioner of the St. Louis Art Museum and a member of the Board of Directors of the St. Louis Mercantile Library Association, the Mark Rothko Foundation, and the Art Museum Association of America. She is a former member of the National Museum Services Board and a former curator of the City Art Museum in St. Louis and the Fogg Art Museum at Harvard.

Peter G. Sparks is the Director for Preservation and National Preservation Program Officer at the Library of Congress. He is a member of the Committee on Preservation of the Association of Research Libraries, past editor of the Journal of the American Institute for Conservation, and President emeritus of the board of the Conservation Center for Artistic and Historic Artifacts, a regional paper conservation facility in Philadelphia.

James N. Wood is Director of the Art Institute of Chicago and a member of the National Council on the Arts. He is former Director of the St. Louis Art Museum and former Associate Director of the Albright-Knox Art Gallery in Buffalo, New York; past Chairman of the Federal Indemnity Panel and past President of the Intermuseum Conservation Association in Oberlin, Ohio.

COUNCIL ON LIBRARY RESOURCES
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COMMISSION ON PRESERVATION AND ACCESS

March 2, 1987

The Honorable Pat Williams
Chairman of the Subcommittee on
Postsecondary Education
House Annex I, Room 617
Washington, D.C. 20515

Dear Congressman Williams:

As chairman of the Commission on Preservation and Access, I am gratified that the Subcommittee on Postsecondary Education is considering the brittle book problem. The prospect of federal assistance in solving this pervasive plague of our nation's libraries offers hope for what otherwise may be an almost insurmountable problem.

Your committee will be addressed on this issue by some of the most knowledgeable people in the country on the subject of brittle paper. I will, therefore, limit myself to just a few brief points that I believe argue for the importance and legitimacy of significant federal support to help deal with the problem:

First, with hundreds of millions of volumes already at or near the point of deterioration where normal usage is no longer possible, it is clear that brittle paper is indeed a massive problem that threatens a large fraction of our written heritage, our informational capital.

Second, the cost of preserving the information printed on brittle paper is very large. A few hundred million dollars must be spent on preservation over the next decade or two, even if careful choices are made to preserve only those materials that are judged to be of greatest importance.

Third, with as much as 25 to 50 percent of their collections "at risk" or already deteriorated beyond use, it is clear that individual libraries and universities working alone cannot hope to find the resources necessary to solve the problem. We must bring a focused, cooperative plan of action to bear upon it. Such a plan will not only attain prompt action and avoid wasteful redundancy, but will have the added advantage of making the fruits of the effort universally available to small libraries as well as large. Thus, although the brittle paper problem and the responsibility for it resides largely in a relatively small number of major libraries, the benefits of a suitable solution can be shared by all.

Billy Frye, Emory University, Chairman • Margaret Aster, Yale University • Herman Fussler,
James Govan, University of North Carolina at Chapel Hill • Warren Haas, Council on Library Resources
Kenneth Gross Lows, Indiana University • Carole Huxley, New York State Education Department
Sidney Verba, Harvard University • William Welsh, Library of Congress

The Commission on Preservation and Access has proposed a plan of cooperative microfilming that would (1) greatly accelerate the pace of microfilming, beginning now and continuing over the next decade; (2) assure the participation of the nation's principal libraries in proportion to the scope and value of their collections; (3) avoid wasteful redundancy; and (4) make the results widely available so that all benefit.

The key to the plan is funding. Obviously, major funding is needed to pay the costs of a coordinated plan of preservation on the scale that is needed. Less obvious, perhaps, is the fact that such funding is also necessary to coalesce the participants around the effort that we envision.

Many university and other libraries have already shown their commitment by establishing their own preservation programs and by supporting and endorsing the activities of the Commission. Undoubtedly, they will continue to provide further support in the future within the limits of their capacity. Funds will also be sought from foundations and corporations, and more states will be encouraged to provide significant funding for preservation, as New York has done. But even given such sources of funding, federal funds will be needed to assure that we make significant progress while there is still time. I hope that your Committee will not only agree that it is necessary to spend federal funds to assure the success of this undertaking, but will also find it eminently appropriate to do so as we celebrate the bicentennial anniversary of our Constitution. We would all agree, I am sure, that the printed word represents an invaluable and irreplaceable part of our national heritage. The task is urgent.

Again, I want to express my deep thanks to you and the Committee for giving your attention to the brittle paper problem.

Sincerely yours,

Billy E. Frye
Chairman, Commission on Preservation and Access
Vice President for Research and Dean of the Graduate School, Emory University

BEF/et

UNITED STATES HOUSE OF REPRESENTATIVES

SUB-COMMITTEE ON POST-SECONDARY EDUCATION

Written Testimony on the Brittle Book Problem

The need for action to alleviate preservation problems is undeniable. The brittle book problem, in its enormity, demands both that we develop and implement a program of crisis management for today and that we put in place a means of strategic planning for the future. A program of crisis management is mandatory if we are to save the millions of volumes in our nation's libraries and repositories that are currently too brittle for continued use. Such a program should include three categories of action:

1) the immediate design and creation of an infrastructure of cooperation and commitment;

2) a massive infusion of financial support;

3) an equally massive infusion of human resources.

In many ways, the Council on Library Resources' Commission on Preservation and Access has already begun to respond to the need for an infrastructure of cooperation and commitment by stating the case for a concerted program of action among the nation's research institutions. The Commission is in a position to serve as the focal point for preservation advocacy both nationally and internationally; its role as primary organizer of a unified national plan for preservation action should be sanctioned by both the United States House of Representatives and Senate. Further, that Commission should be provided with funding at a scale sufficient to follow through with this broad responsibility.

Although our national libraries and repositories have for years recognized the need for long-range planning to cope with their preservation needs, few, if any, have the resources to deal effectively with the problem. Through the Commission, Congress might provide specialized funding packages, specifically earmarked for converting currently embrittled materials into stable media. As a prerequisite to the receipt of this funding, these institu- tions would develop long-range preservation action plans and associated budgets for the identification and reformatting of the important materials in their collections.

Much of the reformatting activity in which institutions are currently engaged is funded through such agencies as The National Endowment for the Humanities (Office of Preservation) and the Department of Education (Title II-C). The budgets for these

agencies should be substantially increased, thus making available greater support for fledgling efforts and at the same time providing opportunities for the expansion of existing reformatting capabilities in both the private and public sectors.

The management of a national plan such as is being described, endorsed by Congress, implemented by the Commission and funded by both federal agencies and private sector dollars, could be supported further through an active advocacy role on the part of members of Congress in their home states.

Currently, The National Endowment for the Humanities supports those states committed to the U.S. Newspaper Project, a project designed to preserve the content of all at-risk newspapers published in the United States. Similar projects should be encouraged and funded at the state level to address the brittleness problem as it affects other materials (e.g. maps, photographic materials, sheet music, pamphlets, manuscripts, books and journals) residing in our state libraries and repositories. These regional treasures are typically unique and are as vital to our national heritage as are the holdings of the Library of Congress.

Cooperation and commitment to the preservation of deteriorating materials is more common today among the nation's academic research institutions than it was ten years ago; nevertheless, we are still faced with the certainty that the number of endangered materials far surpasses our current financial capability to respond. Specifically, there are currently too few microfilming centers where materials could be sent for reformatting, not enough trained people to staff them, and not enough dollars to pay for all the work needing to be done.

The House of Representatives can, by officially sanctioning and funding the work of the Commission on Preservation and Access, by increasing its funding support of The National Endowment's Office of Preservation and The Department of Education, and by encouraging individual responsibility for state-held materials, have a major impact on both the numbers of endangered volumes we are able to save and the speed at which we are able to preserve them.

Submitted By: Richard M. Dougherty
Director, University Library
The University of Michigan
Ann Arbor, Michigan
March 2, 1987

Statement of Nova Iran Corporation
A Subsidiary of Union Carbide Corporation
Before The
Subcommittee on Postsecondary Education
Committee on Education and Labor
U.S. House of Representatives
March 9, 1987

Nova Iran Corporation, a subsidiary of Union Carbide Corporation, is pleased to submit comments to the Subcommittee on Postsecondary Education on the problem of decomposition of books - becoming "brittle" - and on emerging technologies to combat this problem. It is a problem that is of increasing concern to all libraries and educational systems.

It has been estimated that thirty to forty percent of the contents of U.S. libraries are becoming or already are brittle. Libraries are encouraging publishers to print on non-acidic paper to prevent this problem in future generations, but progress has been slow.

There clearly is a need to find ways to keep books available for use by future generations. Some have suggested that society move away from books in favor of computers and microfilming of written material. While these technologies are important, and have a place, we must preserve the heritage of the past and the vitality of new generations of writers and publishers. To do this, new ways must be found to preserve books and other written material and documents in their original state.

Nova Iran Corporation has developed advanced technology which will help address the problem of brittle books. This technology relies on the use of parylene protective coatings.

Developed by Union Carbide in the 1960s, parylene is an essential tool for the electronics industry as a means of protecting delicate microcircuitry from moisture and corrosion. Parylene is the generic name for certain polymers known as para-xylylenes. Its unique physical and chemical properties, coupled with an advanced application process, make parylene an important new conservation medium for books and other archival materials.

Parylene polymer is colorless and transparent. It is extremely resistant to chemical attack and is insoluble in most known chemicals. It is also extremely resistant to moisture in any form. It remains stable at all temperatures that books and other archival materials are likely to be exposed to.

The polymerization process, done in three steps, is accomplished at ambient room temperature without any thermal, mechanical or chemical stress placed upon the materials being coated. Parylene polymers are deposited onto these materials so that all sides of an object are coated uniformly.

The capability of parylene coatings to be highly efficient in their application become significant when related to the encapsulation of books and other archival materials. Paper is, in essence, a cellulose sponge composed of thousands of individual cellulose fibers. Parylene, rather than being a surface coating, will penetrate the paper and encapsulate each individual cellulose fiber to a uniform thickness.

During the deposition process the parylene will form what are essentially polymer "bridges" between individual fibers. Together these bridges significantly strengthen the paper. Optimum strength has been established for different materials and can be readily determined for books or archival materials to be encapsulated.

Tests have demonstrated the protection provided by parylene coatings. For example, pages from a 20-year-old pulp paperback novel encapsulated with parylene demonstrated tremendous resistance to the stresses placed on them.

In one test, for example, a corner of an encapsulated page was bent back and forth through 360° and creased with the fingers after each flexure. This is a commonly used test for embrittlement. After flexing the corner 1000 times, the corner piece showed little evidence of separation. A normal page fell apart after flexing it less than 100 times.

In another test, parylene encapsualted paper immersed in water for six months showed no evidence of deterioration, while regular paper had become translucent and brownish in color limp and easily torn.

The encapsulation process should be irreversible on most if not all organic substrates. Its applicability should extend to entire books, using special techniques and fixtures. A number of books, representing a variety of techniques, coatings and thicknesses, are undergoing analysis in cooperation with the library of Congress.

The barrier properties of parylene are known and documented and the technology has been well established and refined over 20 years. This technology provides a new range of alternatives for the field of conservation of artifacts and archival materials. The addition of new technologies, or the application of existing ones, serves to place additional tools in the hands of conservators, thus increasing their capabilities and contributing to the preservation of materials which would eventually be lost if such alternatives were not available.

Our children and their children will some day thank us for seeing ways to preserving those precious books that will some day comprise the written account of their legacy.

We hope this brief discussion of the parylene coatings technology Nova Tran Corporation has developed and the potential applications to the conservation of books and other archival materials will be helpful to the Subcommittee.

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Prepared Statement of Association of American Universities, National Association of State Universities and Land-Grant Colleges

This statement addresses the problem of brittle books--the real and growing threat to substantial portions of the printed record of our past--from the perspective of university presidents responsible for some of the major libraries housing these threatened collections. The library plays a central role in the operation of a research university: the business of universities is the discovery, organization, and dissemination of knowledge: and the library is the facility in which accumulated and accumulating knowledge is catalogued, stored, retrieved, and shared. In most disciplines, library collections are the primary scholarly tool for both students and scholars; in disciplines such as history and literature, libraries are the virtual research laboratories of faculty investigators.

Many people, while they understand the importance of libraries as essential repositories of information, nonetheless view them as rather static places, easily and quietly accommodating vast stacks of books. A university president is quickly disabused of any such notion by contemplating the library budget. The volume of information has grown exponentially; it is not surprising, therefore, that the operating expenditures of university libraries have substantially exceeded rates of inflation.

Superimposed on this struggle to keep pace with the burgeoning of information is the urgent need to preserve the record of our past. The deterioration of existing printed material is the most serious crisis confronting research libraries. But it is a crisis, not just for a set of academic institutions but for the nation. The cause is the disintegration of acid-based paper; the consequence is the progressive, irreparable loss of printed information, the principal means of carrying the past into the future. In the major research libraries, approximately one-fourth of the books are already brittle--too deteriorated to be safely used. As high as 80% of the volumes in these collections were manufactured using acid-based paper; they are steadily deteriorating and, without preventive action, will become brittle.

A primary dimension of our intellectual heritage is at risk. The costs of inaction are broadly cast and unacceptably large. The need for sustained, systematic action is immediate. The responsibility for action is widely shared--universities, foundations, federal and state governments must act.

Several responses to the preservation problem must be carried out simultaneously. Fortunately, a number of efforts are already underway. More books are being published on acid-free paper. The Library of Congress has made considerable progress in developing a process for mass deacidification. Many individual libraries are carrying out preservation projects. Several states have begun statewide efforts. The federal government provides funds for preservation through the recently established Office of Preservation of the National Endowment for the Humanities and through the Title II-C research library grant program administered through the Department of Education.

These activities are important and must be continued. But much more remains to be done. For more than two years, the Council on Library Resources has sponsored a series of analyses and discussions of the preservation problem. With funding provided by private foundations, CLR organized the Committee on Preservation and Access in June, 1984. The committee included library directors, university presidents, provosts, scholars, and state and federal government officials. Over 18 months, the committee examined the problem in all its dimensions: the number of volumes at risk, the solutions available, the infrastructure needed to carry out the procedure selected, and the cost and duration of the effort.

Although the quantitative dimensions of the problem are difficult to specify precisely, certain conclusions are clear. The number of volumes at risk is enormous; after factoring in duplicate copies, volumes already preserved and those that, for a variety of reasons will not be saved, in excess of 3 million volumes are at risk. Because the costs of preserving the books themselves is prohibitive, the preservation effort must focus reproduction of the contents. The most feasable technology now available to accomplish this is the production of archival quality microfilm copies of text. The costs involved are substantial, perhaps $15 million annually over a ten-year period.

The Commission on Preservation and Access has been organized to carry out a coordinated, national preservation program. Formed in conjunction with commission, the National Advisory Council on Preservation will provide advice to the commission and carry information to its constituent organizations, which represent universities, libraries, scholarly groups, and government agencies.

Initial funding for the work of the commission is being provided by a group of universities and foundations. The Association of Research Libraries is developing the essential bibliographic network to track accurately the microfilming activity that will be carried out.

Thus, the critical decisions on how to proceed have been made, the technology to preserve threatened stores of information is available, and the organizational infrastructure to carry out a national effort effectively and efficiently has been created. What now is needed is the provision of sustained, stable funding to support a multiyear effort.

It is appropriate and essential that the federal government be a key supporter of this effort. Universities have accepted in advance their responsibility to provide significant new funds for preservation. Foundations have contributed and undoubtedly will continue to contribute. But the federal government must increase

its investment beyond the focused projects and model programs it is now supporting to contribute a stable source of funding for the project over the duration of its activity. The problem is national in scope, and the federal government must be a central participant in the solution.

It is important to note that this effort is more than a battle to prevent irreparable loss. In the process of saving the contents of deteriorating texts, we will be creating an accessible national collection of preserved materials--to quote from a report of the Committee on Preservation and Access, "a substantial and growing collection of master copies of items produced from deteriorated books selected for preservation because of their importance and available for replication for collections or personal use." This expansion of access to valuable collections will directly benefit a large number of libraries and individual scholars. Properly and promptly done, a national preservation project will not only save our threatened record of the past but will transform that record into an expanding and widely accessible collection for the future.

The preparation for this national endeavor has been carefully and thoughtfully conducted. It is now essentially complete. It is time to begin the preservation work.

Mr. WILLIAMS. This hearing is adjourned.

[Whereupon, at 12:10 p.m., the subcommittee was adjourned.]

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